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ART. I.—*A Report on Typhoid Fever made to the Scott County Medical Society.* By W. L. SUTTON, M. D., of Georgetown, Ky.

INTRODUCTORY.

A report on typhoid fever made to the Scott County Medical Society, at their annual meeting in April, 1846, in accordance with the constitution of that Society, was the origin of this essay. Subsequently, I reflected that as this form of disease is at present attracting much attention on the part of our profession; that if not a new disease among us, some very important features in it have been overlooked; that in various portions of the West and South, it does not exist, or has not been detected; that it is very important, in this transition stage of our knowledge of this subject, that all the means which can be made available towards forming a fixed and correct

opinion, should be within reach; and that a true delineation of this form of disease, as it appears at different times and places, drawn by faithful observers, is very important to coming to correct notions as to its nature, causes, and treatment; I have determined to discharge what I conceive my duty to the profession, and give an account of it, as it appeared in Georgetown and its vicinity, for the last six years. My remarks are not intended to apply to any other time or place. I have depended mainly upon my own observations as to facts. I have taken considerable pains to make myself acquainted with the circumstances attending these facts; so as to be better enabled to judge what influence these circumstances exerted upon conclusions to be drawn from these facts.

I have endeavored to observe correctly, and to report faithfully. I have no favorite theory to maintain; and if I had, I should desire a better basis than facts badly observed, or unfairly stated. I have conferred freely with my professional brethren, and have their general concurrence as to the correctness of my observations. Facts, not of my own observation, or which go to militate against those, I have given on the authority of the parties furnishing them. Of course I have introduced none which I do not consider fully entitled to credit.

In considering the etiology, and pathology, I have availed myself of the labors of other men, usually in their own words, that no change of meaning might be given to their facts or opinions, by change of language.

In my interpretations of those facts and opinions, I have endeavored to follow where reason and common sense led the way. I have not attempted to give a complete account of the history, causes, symptoms, or treatment of the disease, or form of disease as it may be. I do not pretend to have settled points in its etiology, pathology, or treatment; but I *have* aimed to give a correct account of its symptoms and treatment as observed here.

Upon some points it may be thought that I have expressed myself too strongly, and it may be so. I know that it is extremely difficult to be sure that we are in possession of all the facts in any given case. I know too, that I am as liable to overlook facts and circumstances as others. I can only say, if I have drawn incorrect conclusions, no man will regret it more than myself.

From the fact that I have quoted pretty freely from Prof. Bartlett's work on typhus and typhoid fevers, and in some instances have viewed his facts in a light different from that in which he views them, it may be supposed I take pleasure in differing from him. I hope the general tenor of my remarks will show, that my object is truth—not to agree or disagree with any one. Certain it is, I love my profession, and honor its members as the benefactors of my species; and no one of them more than Prof. Bartlett.

The truth is, I look upon his work as an exposition of our knowledge upon the subject; and as it is, or ought to be in the hands of our profession generally, it is convenient as a matter of reference. Valuable as that work assuredly is, I do not think it an objection to the publication of observations made in the West and South, but rather an additional reason for such publications. Differing widely in climate, and in the habits of the people, as this country does, from France and New England, even the same disease may reasonably be expected to present modifications in symptoms, and to require corresponding modifications of treatment; at least observations made in those regions must be verified here, before they can be implicitly relied on. I hope my professional brethren will read this essay, compare the facts and opinions therein contained, with what they have observed in their own practice, and extend to me that charity which a knowledge of the difficulty of properly executing such a task shall suggest—and I hope (may I not be disappoint-

ed) that many of them at different points will follow the example, and give me an opportunity of profiting by their labors.

To this essay it may be objected that it is unnecessarily minute in some particulars, or that some portions are even irrelevant to the subject. I feel the objection; but I likewise know that in examining subjects not thoroughly understood, it is difficult to determine the weight which circumstances apparently minute and unimportant may assume; or what may prove relevant or irrelevant to the subject. Certain it is that during my researches since beginning this essay, my views upon some important points have been materially modified.

CHAPTER I.

ARTICLE 1.

NAME.

It frequently happens that a name of disease, which to one person, and in some circumstances, seems peculiarly appropriate, to other persons and in different circumstances, appears very differently.

Such is particularly the case with regard to the term "*Typhoid Fever*," which has been applied to this affection. The term typhoid had had a signification sufficiently definite, as indicating that state of the system, characterised by a quick, weak pulse, a dry, black tongue, great muscular weakness, frequently subsultus tendinum, low delirium, petechia, &c. This signification however has become sadly unsettled by its new alliance. It now has no necessary connection with any one of the group of symptoms, which were formerly necessary to its existence. It is now applied to a state in which the pulse may be strong or weak, quick or slow; subsultus or not,

tongue dry or moist, with or without delirium; with or without petechia; occasional epistaxis, a meteoric state of the abdomen; diarrhea.

In fact many cases of typhoid fever, run their course without a single symptom which characterises the "*typhoid state.*" Hence it has happened that two physicians talking of typhoid fever, attached very different ideas to the phrase; one having dothinenteritis in his mind, the other, the typhoid state of bilious fever. I fear that ambiguity arising from this mode of expression, has found its way into our standard writers *eg.* Prof. Bartlett speaking of certain cases, says: "So far from being cases of typhoid fever, even the typhoid state was not present." What meaning does he attach to the phrase here? I apprehend most persons will respond, that state indicated by quick, weak pulse, &c., &c. Yet it seems clearly meant to indicate something necessary to constitute typhoid fever; which as before observed, is not true, of that train of symptoms. On the other hand, to speak of typhoid fever existing without typhoid phenomena, is very close akin to a solicism. It is to be regretted that a phrase of well established meaning, should have been used in a sense materially different from that meaning.

Our phraseology ought to be so uniform, that one man of fair attainments in the profession, should easily understand any other one, when delivering his opinions on medical subjects. I therefore think it unfortunate that the term typhoid fever has been appropriated to this disease. But as the professional writers seem generally to have adopted the phrase, I must consent to the verdict.

It is unfortunate too, that names of disease should ever become fashionable. Some years ago, all cases of fever were congestive—now they are all typhoid fever. I have known cases reported as severe attacks of typhoid fever one day, who were walking the streets the next. I have

seen divers forms of disease, febrile, or not, called typhoid fever.

So that the diagnosis is not, in all cases, and to all physicians at least, as clear as noon day.

This disease is called by various names by different writers: as typhoid affection, dothinenteritis, entero-mesenteric fever, follicular enteritis, typhus fever, putrid fever, adynamic fever, ataxic fever, enteric fever, &c.

ARTICLE 2.

HISTORY.

In the summer of 1841, I was desired to visit a young lady, in whom I took much interest. Her case was quite grave, and it appeared to differ materially from any form of fever, with which I was acquainted.

This difference, I was more able to feel in my judgement, than to describe to others; the principal points being a greater disturbance of the nervous system, and prostration of the muscular power. I availed myself of the assistance of the late Prof. Richardson; but it appeared to me, that the disease was new to him as well as to myself. Two months after this attack, five other members of the same family were seized, a good deal in the same way. It now occurred to me, that the disease was most likely, a form of fever, which had been very prevalent about Paris, Kentucky, several years before, and which as I supposed, had been about Lexington for some years. This I was more disposed to believe, because there had at this time, been a good deal of sickness between the residence of this family and Lexington. Under this view of the circumstances, I felt it my duty to request that some physician, residing in Lexington, might see these cases with me. Dr. Holland was selected by the family, under the belief that he had a very extensive

practice, and that he was very successful in the treatment of fever. When he had examined the causes, he gave it as his decided opinion, that it was the typhoid fever of Louis; saying at the same time, that he was very familiar with it, as it appeared about Lexington. Upon my inquiring of him if any dissections had been made about Lexington so as to demonstrate its identity with dothinenteritis, he answered in the negative. Seven cases occurred in that family, two of which were fatal; a third, a lady of about forty-eight or fifty, who was not supposed to be dangerously ill, died instantaneously without a groan; and a fourth, the first patient taken, recovered of the fever only to go into phthisis, of which she died six months after. One other case occurred in that neighborhood about the same time. During the ensuing winter, the disease appeared in our village, and from that time, it has rarely been altogether absent from our neighborhood, although it has at no time raged to as great extent as it appears to have done in many places.

The time just mentioned is the first, as I believe, that I ever saw the disease. I think so, because it appeared to me at that time, to present a phase new to me; and carrying my remembrance back carefully as in my power, I am not able to identify any form of fever with it. In the winter of 1827–'8 I saw a form of fever in Union county, Kentucky, which I thought at one time, might have been the same; but upon referring to my notes of that fever, taken at the time, I am satisfied that the suspicion is untenable. In the winter of 1837, we had a form of fever here, which my friend Dr. Craig thinks now, was the same fever. I am not able to identify the two as one. I recollect very distinctly that purgatives were very prone to run off with watery stools; and that there was considerable disturbance of the nervous system. But I do not remember, that there was much disposition to diarrhea, when no medicine had been taken;

neither can I recollect the features of that epidemic, as those most conspicuous in typhoid fever. I have a distinct recollection too, that there was a material difference in the general appearance of the stools. Although thin, they were less watery than those of typhoid fever. They were also of a decidedly green bilious character. There was however, one exception which made a strong impression upon my mind at the time. In that case, the fecal discharges had a very striking resemblance to those at present observed in typhoid fever. Like the latter, too, it went on to recovery, without that change as to consistence and color, which we then considered essential to convalescence.

This fever bore a considerable resemblance to that of 1827–'8 above mentioned. Dr. Gano, too, who has been practicing here upwards of twenty years, thinks that for a long time, he has seen this fever. He describes an eruption as having appeared upon the neck and face, and occasionally upon the arms and body, which corresponds with the rose colored lenticular spots of typhoid fever.

CHAPTER II.

ARTICLE 1.

CAUSES—AGE, SEX, RACE, AND PERIOD OF RESIDENCE.

Age, recency of residence and contagion are the circumstances enumerated by Louis and Bartlett as of most importance as causes of typhoid fever. I shall append a table of cases, which I have seen during the last twelve months, which will show age, sex, and color of each patient. It will be seen, that of forty-three cases, twenty-six are between fifteen and thirty years; nine over thirty; and eight under fifteen.

The table shows twenty-seven males, and sixteen females; thirty whites; thirteen blacks. A superficial examination of this table would perhaps convey a very erroneous impression. It will be observed, that of the twenty-nine cases originally mine, eighteen were whites; eleven blacks; of these three whites and no black died.

On the other hand, of the fourteen, whom I saw secondarily, twelve were whites and two blacks; of whom five whites and both blacks died. Consultations are more apt to be held over whites than blacks; therefore the proportion of deaths amongst the whites, in the number seen is unduly large. For the same reason, fewer blacks over whom consultations are held recover. Thus both of those mentioned died. For this reason, I think the cases originally mine, are the proper basis for our estimates. It may be proper to state, that the proportion of whites to blacks, within the bounds of my observations, is about 108 to 100.

I had supposed there was a majority of blacks, but from observations made with some care, though not able to say precisely, I am fully satisfied of the proximity to truth in the statement above made. Our population is stationary to a great degree. The principal ingress is from students to our schools, male and female, and journeymen mechanics

We have about two hundred students from a distance. Among these, I have not known of more than eight or ten cases of fever in the six years; and I do not know that any one of them had been here less than a year. Neither do I know, with the exception of four, that any case was one of typhoid fever,* I presume, however, that some of them were. This table shows a large proportion

*Since this was written, I have seen a number of strangers with the fever, still however, not a sufficient number to think that they are at all more liable than permanent residents.

of cases between fifteen and thirty years—a much larger proportion of cases over forty years than seems to be commonly found—a large majority of males—a large majority of whites—and we may say nothing respecting those of recent residence amongst us. The field is too narrow to found any general conclusions upon. We can only say such has been the result of facts observed by a single individual in a certain location, during a particular year.

TABLE OF CASES REFERRED TO.

NAMES.	AGE.	SEX.	COLOR.	FATE.
J. Stevens	10	Male,	White,	Recovered.
M. Stevens	8	Female,	"	"
*M. Daviess	19	"	"	"
Mrs. McDaniel	45	"	"	"
Taylor	15	Male,	"	"
Reuben	14	"	Black,	"
Elijah	16	"	"	"
Harriet	17	Female,	"	"
Sam	20	Male,	"	"
J. Wallum	20	"	White,	"
*R. Stubbs	19	"	"	"
*D. Stubbs	14	"	"	"
A. Stubbs	23	"	"	Died.
H. Stubbs	12	"	"	Recovered.
Frances Stubbs	17	Female,	"	Died.
Eliz. Stubbs	12	"	"	Recovered.
J. Hall	65	Male,	"	"
Miss Conway	25	Female,	"	"
M. Johnson	35	"	"	"
L. Bell	15	Male,	"	"
Caroline	25	Female,	Black,	"
George	6	Male,	"	"
*J. Sutphin	21	"	White,	Died.
Mrs. Sutphin	50	Female,	White,	"
*Mrs. Brown	25	"	"	Recovered.

NAMES.	AGE.	SEX.	COLOR.	FATE.
Geo. Brown	30	Male,	White,	Recovered.
*Dick	19	"	Black,	Died.
Julia	45	Female,	"	Recovered.
Milly	45	"	"	"
Lewis	25	Male,	"	"
*Wm. Buck	17	"	White,	Died.
*Browning	25	"	"	"
*Bradford	25	"	"	"
Johnson	18	"	"	"
*Burgess	20	"	"	Recovered.
*L. Flournoy	25	"	"	Died.
†E. Duncanson	12	"	"	Recovered.
†Jane	15	Female,	Black,	"
M. Kershaw	30	Male,	White,	"
*Will	30	"	Black,	Died.
*Miss Tapp	25	Female,	White,	Recovered.
*Mrs. Black	25	"	"	"
James	19	Male,	Black,	"

I did not see those marked with a * in the first instance, I saw them generally during the third or fourth week; four of them I saw only once; three thrice; the other seven I continued to attend until death or recovery. Of the last number, three died. Of the other seven, four died; being just one half of the whole. Of the twenty-nine whom I saw at the commencement of treatment, three died. This great disproportion is explained by the fact, that the first mentioned fourteen were far advanced, and bad cases at the start. Of the twenty-nine, two were treated by diet and regimen alone.

Those marked † were cases which I had treated in 1843, for the same disease. To enable my readers to give to this circumstance its proper weight, I will add two remarks: 1st. These two are the only certain cases of a recurrence of the disease in the same individual, within

my knowledge*; but I do not now recollect any case of fever of any kind, recurring in the same individual during the same period. 2d. This occasional recurrence does not prove that this is not a specific disease, because such recurrences take place occasionally in small pox, and other analogous diseases. Wm. Buck had been here about eighteen months. All the others were permanent residents.

By referring to my cases, I am enabled to make out the following tables. It is to be remarked however, that these tables are not to be considered altogether correct, as many cases are not noted; and it is impossible to say what proportion the omitted cases bear to those noticed at any time, or the sex, or color of such commission.

Of the 192 patients there occurred in

Dec.	Jan.	Feb.	Mar.	Ap.	May,	June,	July,	Aug.	Sept.	Oct.	Nov.
3	12	16	8	26	21	21	25	26	17	8	9

Total—Winter,	Spring,	Summer,	Autumn,
31	55	72	34

Table of sex and color:

Male,	Female,	White,	Black,
104	88	118	74

Of the 192 nineteen were forty years old and upwards.

I do not know that I appreciate properly the title of a recent residence as a cause of disease. If we consider typhoid fever as a specific contagious disease, to which a person is not usually liable a second time, we will not of course suppose that a person after having it once will, by changing his residence renew his liability. I presume that the activity of this cause is adventitious rather than

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*During the present year, 1850, I have seen two cases which I consider well marked, occurring in persons who had previously suffered an attack. I have also seen some cases, which occurred in persons who were reported to have had the disease previously, and who probably had, but as I did not see them in the first attack, I do not think myself justified in stating them as cases of a repetition of the disease.

necessary. I suppose that a large portion of those persons who flock to large cities are young persons, precisely within that period of life, at which the liability to fever of all kinds is greatest—that the change in the mode of living is considerable—that there is an unwonted and undue excitation of the various passions—which all acting simultaneously, have a very great tendency to disturb the regular healthy play of the functions, and of course to produce fever. For this reason I presume this cause is less influential in our rural districts.

ARTICLE 2.

DWELLINGS, ETC.

In every case coming under my observation, where a considerable number of cases have occurred in the same family, there has been reason to think that something connected with the situation of the house, may have contributed to the prevalence of the disease.

For instance, at Stubbs', the house was old, and dilapidated; the windows in the upper story open, so that there was free admission of wind, rain, and snow; the cellar, which had usually been occupied as a kitchen and dormitory for the negroes, had during the winter, when the disease prevailed, been closed, and made the receptacle of all kinds of filth, into which the water from the house and yard found its way, for want of proper care to drain it off. At John Laws', where the family suffered severely in 1845, the house was in very much the same situation, except there was no cellar. At all other places, where there has been much sickness, the houses are without cellars, and without means of admitting air freely beneath the floors. I have had the floor taken up to examine the state beneath, but have found no sufficient cause.

It is proper to add, that this condition is almost uni-

versal among the negro houses, and also among such dwellings for whites as have remained from the early settlement of the country. It is also proper to state, that although the statement above made is true as to those families most afflicted, yet the disease has by no means been confined to such houses, but has been found in new houses of the most comfortable construction.

Very lately I have seen a number of cases which may be thought interesting. On the 3d of April, Mrs. C., about twenty-two years old, became ill of typhoid fever, I saw her on the 10th—then no fever known any where in the neigeborhood. She had come home, after an absence of two or three months, some time in February—no fever known in the neighborhood from which she came. The house in which she resided is an old brick, built in 1794, but in a good state of repair and clean. On the 19th Isabella, the woman who waited in the house, sickened. May 1, Moses, Isabella's brother, sickened—he slept in the same house, but not in the same room with his sister—also a negro man thirty years old. About the same time a boy two years old was attacked—this child slept in another house. During the next week two sisters of this boy, sleeping in the same house, were seized, as also a negro girl, nine years old, and daughter to Isabella, and spending the day in the family dwelling, and the nights with her mother. Also a negro man who slept in the kitchen. May 10th, Mr. C., husband to the lady first sick, and his mother, became ill. About this time, May 20th, a brother of Mr. C. came from an adjoining county, and had some chip rubbish removed from the immediate vicinity of the family dwelling. He spent two or three days at the house, returned home, and was taken sick in ten or twelve days. Another brother visited the family two days after the return of the first: upon his return home he had a severe attack. At the time of this last visit, a brother-in-law and sister with their children

and a negro woman as a nurse, arrived on a visit from Missouri. On the 13th of June the sister and nurse were attacked—on the 28th and 30th two of the children became considerably indisposed, remained for two weeks with what seemed to be a mild attack of typhoid fever. A negro man who spent two days there and assisted in laying out a negro who had died sickened on the 16th of June. And my son who had visited the family daily and spent a week, night and day in the family, during their greatest distress from the 16th to the 23d of May, sickened at the end of that time.

A peculiar fatality seemed to attend this spot, as every member of the family complained more or less; and of twenty belonging to the family, eleven had serious attacks, not counting the visitors. The houses in which the negroes were sick had the floors nearly on the ground with no chance for ventilation under them. One house afforded sufficient means for ventilating the rooms inhabited. In the other, consisting of two rooms, one about fifteen feet square, the other ten, circumstances were not so favorable—in the large room were two beds with curtains, a bureau, table, a chest for clothes, and several chairs, besides a truckle bed under one of the others; this room has an outer door, a small window, and fireplace. In the smaller, was a bed, chest, and chairs—no outer door, one very small window near the door opening into the larger room, no fireplace—the ceiling six feet high—both closely chinked and daubed. At the corner of the kitchen, about twenty yards south of the door of the dwelling house most used, and about the same distance east of the negro houses, was a slop trough, which leaked badly, and suffered the slop to accumulate in a sort of mudhole beneath, giving rise to a very offensive smell. These houses are situated on a bluff some forty or fifty feet high, with a large cluster of trees between them, and a creek which runs on the east and north,

which however, had not been sufficiently low at the outbreak of the fever to be suspected as a source of disease.

The sickness was almost entirely confined to those persons who spent their time at and about the dwellings, the field hands being less affected. It is proper to observe that for two weeks during Mrs. C.'s illness, her mother remained with her continually—her father and several of her brothers were there much of the time, but none of them became affected with the disease.

I may remark that this family lives about half a mile from Downing's, and three quarters of a mile from Mrs. Lightburn's, hereafter to be mentioned.

In a considerable proportion of cases, it has appeared to me that the attack was brought on by an undue exposure to cold.

ARTICLE 3.

CONTAGION

Is considered by many as a potent cause of this disease, I shall therefore adduce some facts as observed by myself, and some which have been detailed to me by others in whose accuracy of observation I have full confidence.

1st. Willim Stubbs sickened in Georgetown during the third week of December, 1845, and removed to his father's about three quarters of a mile from town, his father's family being then in good health. This too was about the time when the disease appeared in town. After an illness of three or four weeks he died. About two weeks after his death, two brothers were seized with the fever. About the time they could be considered convalescent, two other brothers and two sisters were confined. One brother and one sister died, and while the other bro-

ther and sister were still sick, a young lady, resident in the family sickened. And about two weeks after, the mother sickened, and at the expiration of three weeks died. Thus in a family consisting originally of eleven, all whites, nine were sick and four died.

2d. In May, 1846, John Sutphin visited his sister at Leesburg, who at the time was ill of the fever; he staid with her for several days, and shortly after his return he sickened. About three weeks after his attack, his sister residing in the house sickened. A few days after, a negro boy was taken. In about a week again his mother and a negro woman, mother to the boy, were taken. About two weeks more, a brother-in-law, husband to the sister was sized. Of these, John Sutphin, his mother, and the negro boy died. In the mean time the physician first in attendance on the family sickened, and eventually died. His student, who had been a good deal at Sutphin's, and also waited on him, sickened and eventually died.

3d. Young Withers came home indisposed, continued to get worse, and after an illness of four or five weeks died. Four brothers and sisters sickened at intervals of four or five weeks. All represented to have been cases of typhoid fever by Dr. Emison.

4th. On the 23d of May, 1841, Rachel Cooper was taken—the fever then prevailing in a family three miles off—whether she had visited that family is not known. On the 26th of July, I visited her mother and four negroes, who had all been somewhat indisposed for several days. On the 22d August, Jane, daughter to one of the negroes, and sister to the others was taken. So, in divers families the disease has attacked different members after shorter or longer intervals.

5th. The disease appeared at the Stamping Ground, nine miles from this place, about the end of December, 1845. At Christmas, Miss Sinclair left Georgetown in-

disposed, and sickened upon her arrival at the Stamping Ground. It is said that most of the first cases in that neighborhood had visited her on her return.—*Dr. Black.* I have it however from Maj. McCalla, a relative, and whose connexions about the place were very intimate, that the first cases which occurred in that vicinity *had not* visited Miss Sinclair. And that himself, who had a severe attack, had not seen any one ill of the fever.

On the other hand, whilst a majority of *cases* are found in clusters, a majority of *families* in which the disease appeared have only one or two sick—at least within a range of time during which contagion can be relied upon as the cause.

1st. During the winter of 1845–'6, some twenty or thirty families of our village were visited by the disease; I think two was the greatest number attacked in any one family. It is true that during the last summer, 1846, some of these families had a case.

2d. At this visitation, the disease appeared in different parts of the town, and in families which had no communication with each other. Miss Sinclair, who was supposed to have carried the disease to the Stamping Ground, was an inmate of Thornton F. Johnson's boarding school, the young ladies of which do not visit among the citizens; and there had been no case of sickness in the family. Again, Wm. Stubbs boarded in a family in which no one had been sick; neither had he seen any one sick since September, when he was said to have visited John Young. I do not know of what disease Young died. Stubbs sickened on 24th of December, after exposure to severe cold. There had previously been a few cases scattered about town, and about this time it became quite common.

Again, on the 1st of August, 1846, I was called to visit five patients at Mrs. Lightburn's, three miles south of Georgetown, all of whom had been attacked within a

week. One of these cases was so mild and indistinctly marked, that I did not consider it as a case of fever. At this time there was no sickness of any kind in that neighborhood; these negroes declared that they had not seen any body sick with any disease. It is true that on the 11th of January, preceding, a boy of twelve years old had the disease in the same family. It is also true that on 22d of September, 1845, four months before this last, I was called to five negroes, one woman and four children, (who were all seized about the same time,) at John Downing's, who lives about half a mile from Mrs. Lightburn's. I think it material to state these facts, and also that no communication was known to have taken place between the negroes at Mrs. Lightburn's and those of Mr. Downing.

The cases at Downing's also were without any clue to connect them with antecedent cases. These cases are all that occurred in that neighborhood, so far as I know and believe, from 1841 to December 1846.

3d. On the 22d of December, 1845, I visited an apprentice of Tyson Bell, who had been ill several days. On the 24th I prescribed for his bed-fellow of about the same age—he however walked the same day seven miles; was confined next day, and had a severe attack. Two journeymen occupied the same room, and one of them at least was a stranger, but neither contracted the disease. Again, during the summer of 1846, a negro woman had the fever, and although very ill, she was compelled to attend to her child six months old, during all of her illness—the child escaped.

I have now given some of the most forcible examples which have come under my observation, tending to show the contagiousness of the fever; and others to militate against its contagiousness. Let us examine them and see to what conclusion we shall arrive. It is easy to understand how a physician with his view fixed upon the

first list of cases, should be entirely satisfied that the disease was contagious; nor is it difficult to perceive how one, who should look at the other list, should come to a conclusion altogether different.

It is not necessary that I should read a homily on the difficulties surrounding this subject, contagion, in promoting the spread of disease. Wiser heads than mine have felt the weight of those difficulties, and abler pens have portrayed them. Neither ought we to be too confident that the laws of contagion are at present fully understood. For instance, one of the laws of contagion, as at present interpreted, is that the time between the infection and that of the appearance of the disease "is scarcely ever less than seven, or more than twenty-one days.—*Parr in Voce.* "One, two, three, or more days, and in some cases though much more rarely, even for weeks after."—*Wilson on febrile diseases. 1st Amer. Ed., Vol. 1, p.* 181. Now it has occurred during the last summer, that a young lady who at the time was a room-mate with three others laboring under small pox, she herself having been vaccinated, saw and played with a child on the 18th of May. The young lady broke out with the varioloid on the 12th of June, and the child with the small pox on the 17th July, (being sixty days from the time she was with the young lady mentioned;) having had no other known chance to receive the infection.*

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*I am admonished that there is probably some mistake about this case. I can only say I have made the statement on the authority of Dr. Hood who attended this case and others which grew out of it—that he was entirely satisfied as to the facts—that at the time the young lady played with the child, small pox existed in no house in the county except the house in which she lived and had not been recognized there as small pox—that upon its recognition, June 1st, great alarm pervaded the country. That it appeared in only three families out of town, and

Again, the distance at which contagion is efficient "is certainly not above a few yards, probably not above a few feet."—*Wilson, v.* 1, *p.* 178.

Another difficulty in our way, is the almost impossibility which frequently exists of arriving at all the facts of the case. Many persons will run risks of contracting disease, and manfully deny those risks. Yet if they escape, they will afterwards brag of their fearlessness. In our country this is especially true of the black population. No faith can be placed on their asseverations. However, this may be explained, I am every way satisfied that it is a fact.

Again, we are told that certain diseases although usually spreading by contagion, do yet occasionally originate spontaneously. "Whatever be the difficulty of tracing the source of other contagious diseases, it is no difficult matter to detect that of typhus. The combination of a very few circumstances, and those of frequent occurrence, is sufficient to produce the complaint. Typhus, that is, fever in which debility prevails, may arise in ill ventilated and crowded places."—*Wilson, v.* 1, *p.* 175.

"According to the observations of M. Gendron, typhoid fever propagates itself very slowly by contagion. The interval between the successive cases varies from three weeks to a month; so that the fever is often several months in spreading through a village or neighborhood. The period of incubation he thinks rarely exceeds eight or ten days, though it sometimes extends to fifteen, and is occasionally as short as twenty four hours.

"He is also led to the conclusion that the power of

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they widely separated—that that in which the child lived was farthest from town, and had no communication with any infected family except that stated in the text.

This is another example of the uncertainty of spontaneous origin of contagious diseases.

transmission, or communication does not exist in the early period of the disease; that it is rarely active before the sixteenth day; and in general terms, that it continues from the third week for an indefinite period, including convalescence. He states some facts which seem to show that the contagious matter may remain in a bed for two or three years."—*Bartlett on Typhoid Fever, p.* 82.

Again, "it is easy to see that this question is one of great practical importance. It can be fully settled only by further and more various observations; and these observations for obvious reasons, can be best made amongst the scattered population, and in the small villages in the country." *Id. Loc. Cit.*

Having stated some preliminary matters, let us now turn to the subject in hand. The chain of cases as they occurred in the family of Stubbs, Sutphin, Withers, and others which might be mentioned, was very much the precise course which is observed in families afflicted by the small pox, measles, scarlet fever, and other diseases, acknowledged on all hands to be contagious. Therefore, contagion is capable of producing such a chain of events. But it is equally true, that the same course is frequently observed in cases of bilious, intermittent, and remittent fever.

I have many times seen one member of a family after another confined with this last form of disease, so as to give an apparent reason to believe in its contagiousness.

Again, I have seen a whole family so afflicted, that there were not enough well to wait upon the sick. We have a right to conclude then, either that bilious fever is contagious or that typhoid fever *may* not be so.

As several cases appearing successively in one family do not prove conclusively that such cases are kept up by contagion, so a single case appearing in divers families does not prove that such cases are not of a contagious character. I can readily believe that such facts take

place in scarlet fever, measles, &c., though I do not now recollect any instance of it.

But it is said that diseases which are usually propagated by contagion, occasionally originate spontaneously. I apprehend however, that this is more frequently true in appearance than in reality.* A person may receive an infection and not be conscious of having been exposed to contagion, and the disease appearing afterwards, it is supposed to have arisen spontaneously. This circumstance has transpired twice in the last three years in this town. On the 9th of April, 1844, a young lady arrived in our town; on the 21st she broke out with measles. At that time we had no measles in our town; but we very soon had plenty. She was positive that no measles existed in the neighborhood from which she came, and that she had seen no person with it whilst on the journey. This version is the more worthy of credit, because she was very apprehensive upon the subject; having been strongly impressed by her family physician that measles would be to her particularly dangerous.

Again, in the latter days of April, 1846, the small pox appeared here, in a room occupied by three young ladies, each of whom took it one after another. Great difficulty existed in discovering the manner of its introduction. At length it was ascertained that a fourth young lady, who had been vaccinated, had arrived at the house two or three weeks before the disease appeared, and had been much in company with these ladies; and further that she

*I certainly do not mean to say that contagious diseases *never* originate spontaneously. In a practice of thirty years I have seen one case of scarlatina which seemed to arise spontaneously—but one, as at present recollected. The object of my argument is to impress my conviction that typhoid fever arises spontaneously *too frequently* to admit of its being classed among contagious diseases.

had been confined two or three days by indisposition during her journey; and that she had, on her arrival here, two days after her confinement, an eruption, the character of which, as it attracted no particular attention at the time, could not be ascertained. Years before, she had seen small pox, and expressed her opinion that the young ladies above mentioned had that disease. She had not recently seen any one with the small pox, and had no suspicion that she had herself undergone an attack of varioloid, yet such doubtless was the fact.

But according to Sir Wilson Philip, or Philip Wilson, there is no difficulty in detecting the source of typhus contagion—"few circumstances, and those of frequent occurrence are sufficient; ill ventilated and crowded places are all that is necessary." I however do not believe that those circumstances do occur in this section at all.* The dwellings of our population both white and black, are generally sufficiently ventilated. They consist for the most part of houses but a single room deep, sometimes two, into each of which entrance is through a door in the outer wall, and usually a middle door. There is always a chimney, and usually a window or two. In one of these rooms, say of twelve to eighteen feet square, a family of negroes, say of five to eight, frequently sleep. They usually, even in the summer time, have more or less fire in the chimney every evening. This is the best show for ill ventilated and crowded places which we can furnish in this region. When we reflect that these chimneys very frequently would admit a flour barrel readily, and the fireplace appears to have been constructed more with a view to the destruction than to the saving of fuel, the dwellings too, composed of logs, rarely closely filled in be-

*One of the negro houses at Mrs. C.'s before mentioned comes nearer the description than any house I have seen.

tween; I really do not think that such habitations can be called ill ventilated.

When a contagious disease first makes its appearance in a neighborhood, it usually appears not only in a single house, but in a single individual, or it may be in two or three, in quick succession, if so many have been exposed to it at once. It rarely or never appears about the same time in different families, in the same neighborhood, those families having little or no communication with each other. Yet such was its mode of access in Georgetown in the fall of 1845; and such, if we may believe Maj. McCalla, its advent upon the Stamping Ground, the ensuing winter. Again, five cases occurred at Downing's in the fall of 1845; these were in a negro woman and her four children. These were all seized almost simultaneously; they occupied a single room, and no disease was known in the neighborhood.

At Mrs. Lightburn's four cases ocurred in August, 1846, almost simultaneously—these occupied three rooms.

At Mr. Cooper's in 1841, five cases occurred in a like extremely short period, the mistress, a negro woman and her three children. In that family, the negro woman had been little exposed to danger from the case which had occurred in the family two months previously, the others not at all—these four negroes occupied three rooms.

It does appear to me that these cases are altogether irreconcilable with the idea of contagion. No disease being in the family, or indeed in the neighborhood, four or five persons are attacked in a family by a disease (which spreads slowly by contagion) within the space of two or three days. If contagious at all, these, (at least two of them,) must have been cases of spontaneous origin because there was no source to which the disease could be traced; and besides, too many cases occurred at once, to suppose that the disease had been introduced from other families. But it would be very strange, that

circumstances sufficient to produce an outbreak of a contagious disease, should exist, and yet that the disease should spread no farther after those first, and simultaneously attacked. This, however, was the case at Mr. Downing's and Mrs. Lightburn's.

Take another case: Tyson Bell's two apprentices sickened, with an interval of about a week. Two roommates, of an age considered particularly favorable for the invasion of typhoid fever, and one at least, if not both of recent residence in our town, escaped. Again, during the fall of 1846, a negro woman was seriously sick at the same house, and was compelled to attend to her child during the greater part of her illness, but the child escaped.

In addition to this, I have known many cases where the patient was one, whose situation was calculated to produce the greatest solicitude, and of course the members of the family were much exposed to danger, if the disease is contagious, who nevertheless all escaped. I have in my mind now a lady of twenty-five, married ten years, with no children, but extremely anxious to have some, in the eighth month of pregnancy, and having numerous relatives; during winter sick for four weeks, and eventually dying without communicating the disease to any one of her numerous friends.

From eight to fifteen days is the time of incubation as allowed by Bartlett; but I have already expressed an opinion that we have not all the information on that point which is desirable. I have given a case too, in which it seems well ascertained, that the infection of small pox remained dormant about sixty days. It is true, that contagious matter in the state of fomites, may remain in a state fit to become active, for an indefinite length of time. Bearing these facts in mind, and allowing them all due weight, it does seem to me that it is still too much to ask of contagion an explanation of the cases at Downing's and Lightburn's.

At the time the cases occurred at Downing's in 1845, I am not aware that the disease was any where in the country, certainly not in that neighborhood.

Four months afterwards, it appears in a boy not known to have visited Downing's, and not likely to have done so, being rather too young to run about the neighborhood. Again, seven months after this, four cases occur at once in three different houses, one of them it is true, in the same house as that in which the first was sick. This was the dwelling house of the family, plastered and painted, and altogether as unlikely to afford a lurking place for fomites as any other house. But fomites here could not affect the other three, as they did not go into the house, being field hands. I have said that no reliance can be placed on what negroes say, as to their visiting sick acquaintances. But their denial of such visits does not prove that such visits were made. When there are no sick to visit, they may be believed; and further it is fair to state that those sick at Downing's were precisely those least likely to visit, if there had been cases in the neighborhood, viz.: a woman and her children, the oldest child twelve years old.

According to my idea of a contagious disease, the presence of contagious matter is, with very rare occasional exceptions, *essential* to its propagation. It is not necessary that every person exposed to the contagion shall become infected. On the other hand, circumstances may exist which shall prevent to a great extent, or even altogether, the spread of the disease. Seed may be sown in the earth, and afterwards so damaged that germination will not ensue; yet no germination can take place where there is no grain to germinate. A contagious disease, whose infection may remain dormant in the system for seven months, or be quickened into life in as many hours; which may appear in half a dozen members of a family, in as many days, without any chance of introduction from without, and then spread no farther in that family, or neigh-

borhood—which can originate in divers families in the same village or neighborhood, those families having no communication with each other—which can originate frequently at divers points in the country, and infect but one or a few persons—which, in one word, shall frequently set at nought all the laws of contagion as usually understood, although it may at times seem to obey those laws, is a contagious disease which I do not profess to understand. Neither does it seem to me, that anything is gained in etiology, by calling in the aid of such an agent.

CHAPTER III.

ARTICLE 1.

SYMPTOMS—MODE OF ACCESS.

In a considerable proportion of cases, the attack comes on suddenly with a marked chill; and occasionally light chills are repeated at irregular intervals.

Most commonly however, the patient complains of indisposition, accompanied by muscular debility, and disinclination to mental exertion. In these cases, the alteration from day to day is so slight that the patient frequently becomes decidedly ill before he is willing to acknowledge that there is anything the matter. Many cases which come on thus gradually, remain mild throughout; others however increase in severity continually, and become the very worst cases of disease. In one case, to be mentioned hereafter, the attack seemed to be ushered in by a state of congestion. I have seen two cases in

which the attack commenced with inflammation, swelling and hardness of the breast so as to threaten mammary abscess. Also several in which a dysenteric state of the bowels existed for a day or too; when the disease assumed its usual form.

ARTICLE 2.

PHYSIOGNOMY AND NERVOUS SYSTEM—EXPRESSION OF COUNTENANCE.

SECTION 1. When called to patients laboring under this disease, we are frequently surprised to see the great placidity of countenance. This is so marked in many instances, that we might suppose there was nothing the matter.

This placidity frequently continues throughout the disease to convalescence or death. In many cases, however, there is in the countenance, a very marked indication of suffering. In some of these cases, the countenance loses its expression of suffering in the progress of the disease, without there being necessarily any abatement in its severity.

SEC. 2. The *sensations* correspond very much with the expression of countenance. When this is placid, the patient replies that he is "right smart," pretty well," "better to day," or something of like import. On the contrary, when the countenance is indicative of suffering, he complains of his head, his back, his limbs, of muscular soreness, or some indefinite sensation of uneasiness.

SEC. 3. *The state of mind* seems to be that of weakness rather than of perversion. In a good many instances, although there appears no perceptible affection of the mind, there is a total forgetfulness of everything which occurred during the attack. I am of the opinion

that this is true much more frequently than is supposed. A few days ago, I saw a lady whom I attended in 1844, in an attack of medium severity, and whom I did not at any time, suspect to be at all affected in her mind, neither did her attendants. I asked her how much she remembered of circumstances which occurred during her illness? She answered that the first she recollected, was my telling her that I did not think it necessary to visit her any more. The patient does not answer questions readily, and has not a distinct recollection of events, which have recently transpired, as connected with his situation. But the forgetfulness does not extend to events which transpired before his illness. As the disease advances, this state of mind becomes more marked; and anon, aberration of mind is observed upon first waking. To this succeed delirium, especially at night, and low muttering. Instead of this low muttering delirium, in a few cases it is of a furious character, such as may well be denominated raving mania. There is usually more or less headache, especially in the anterior stage of the disease. After a few days, this is less complained of, whether the disease is progressing favorably or not. If progressing unfavorably, shaking the head will occasion pain when none is perceived when it is still.

Sec. 4. *Senses.*—Feeling is rarely much deranged. Sometimes there is muscular soreness which does not admit the limbs to be handled without some pain. *Sight* is exalted; the eyes are not able to bear the usual amount of light, and the patient frequently lies with them closed. *Hearing* is also more acute. Noises which are scarcely perceived by others, are annoying, such as ordinary conversation, or crackling of newspapers in turning them to read. *Tinnitus aurium* is frequently present. As the disease advances the hearing becomes less acute, and occasionally decided deafness takes place. I have made no remarks as to the sense of smell. The *taste* is more or

less deranged. How much of that derangement is attributable to the condition of the mucous membrane of the mouth, I am not prepared to say.

Sec. 5. *Wakefulness.*—At the commencement of the disease there is frequently no sleep for several days; and the patient earnestly desires something to induce sleep. As the disease advances, this state may continue, or be exchanged for more or less somnolence, with a somewhat heavy respiration.

Sec. 6. *Muscles.*—One of the most distinguishing features of this disease is muscular weakness. A person may lie in bed, and seem to be but little indisposed, may feel well, but cannot walk or even sit up without an unaccountable sense of weakness, frequently attended by a giddiness and indistinctness of vision. This debility is sometimes so great, that the patient can scarcely raise his head. I have seen one case at least in which this extreme prostration was attended by rigidity of the muscles generally. Like all other symptoms, this is not always equally well marked. I have seen a patient sit up on the side of the bed and wash her face and hands within a few hours of death; and turn herself on the side in *articulo mortis.* In the latter stage of severe cases subsultus tendinum takes place.

ARTICLE 3.

SANGUIFEROUS SYSTEM—PULSE.

Section 1. In the commencement of the disease, after the chill, if there has been one, there is usually some increase of force and frequency of pulse, but it is not very marked. I have rarely seen it such as to suggest the propriety of venesection. In a majority of cases, the

pulse is from five to fifteen beats more frequent in the afternoon than in the morning.

As the disease progresses, the pulse increases in frequency, but usually diminishes in fullness, until at the acme, it ranges from one hundred and ten to one hundred and thirty, sometimes much higher. I have seen cases again, during which the pulse was little affected during the whole course. Again, I have seen one case at least, in which, the pulse remained at fifty throughout; it was full and laboring and seemed to demand the lancet. In a considerable number of cases, when improvement had commenced, the pulse has fallen in frequency rapidly, and has been attended with the same impression of fullness, and laboring.

Sec. 2. *Epistaxis* I have rarely seen, and it has usually been in persons who are habitually liable to it. Indeed of five persons in one family, which was strongly disposed to epistaxis, or rather in which it was very common, but one is noted to have had it.

During the present year, 1847, epistaxis has been much more frequent in proportion to the number of cases than I have noticed heretofore. One half of all cases having been marked by it. The same remark, however, applies to the measles of the present year. In my own mind, I draw a distinction between epistaxis as it occurs in the early and late stage. In the first instance, so far as my observation has extended, there is a stillicidium of a few drops, of no obvious import, and followed by no appreciable consequences. In the second, the hemorrhage is occasionally alarming, and may be fatal.

Sec. 3. Hemorrhage from the bowels, has been somewhat more common than from the nose. That too, has always been in the advanced stages of the disease, and the cases have been of considerable gravity. I have seen one case, in which there was a considerable discharge of bloody urine. That too was a grave case.

SEC. 4. *Congestion.*—In September, 1845, I saw a case in a middle aged gentleman of Fayette county, who, from the description of his physician, would seem to have labored for four days under symptoms of a decidedly congestive character, viz.: cold, shriveled surface, frequent, small pulse, hurried, panting respiration, attended by sensations of great heat, and oppression in the chest. This state had been removed when I first saw him, it was said, by sponging the body with cold water. After this, the course of disease was that of a severe case of typhoid fever.

ARTICLE 4.

DIGESTIVE SYSTEM—MOUTH AND TONGUE.

SECTION 1. At the commencement of the disease, the tongue is usually moist, whitish, with red papillæ sticking up through the white coat—at other times, there is little or no alteration from health, in its appearance. Frequently it is broad, sometimes rather narrow. At this period there is nothing remarkable about the lips. As the disease progresses, the tongue becomes less moist, or at least there is more clamminess about it; the papillæ are more distinctly marked, the edges begin to become red, the taste is vitiated, the lips begin to become red, and somewhat dry. There is frequently a slight soreness of throat, perhaps only observed upon swallowing; and by inspecting the fauces, a slight redness may be observed.

As the fever advances, the tongue becomes more and more dry, sticky, and dark; the teeth become encrusted with sordes, the lips dry and disposed to crack. Occasionally the first coat will leave the tongue red, shining,

slick, and dry; sometimes moist, but yet shining. Sometimes the tongue is covered with a layer, very much resembling tubercular matter; at other times, with what might seem to be fine particles of coagulable milk, easily scraped off, but soon reappearing. In a few instances the tongue is considerably swelled; it may be at the same time moist. As death approaches the tongue becomes more and more dry and thick, so much so, that it is difficult to keep it moist enough by giving the patient fluids, to enable him to speak distinctly. Presently he becomes unable to protrude it.

Sec. 2. *Nausea and Vomiting.*—There is rarely nausea or vomiting. Yet in a few instances one or both may be present. But the appetite is gone, or at least there is no disposition to eat. Thirst is frequently urgent. In a few rare instances it happens that the appetite, at least a sensation which the patient regards as an appetite, remains throughout the attack, even until within a few hours of death. In a few instances I have seen towards the close of bad cases, a continued vomiting of dark green bile, very much as in bad cases of bilious fever. Such cases have been attended by yellowish tongue and bitter taste in the mouth.

Sec. 3. *Diarrhea.*—Patients frequently suffer with diarrhea for several days before they are confined to bed. This may consist of frequent small discharges of liquid feces; or there may not be more than one or two dejections a day, but those very large and serous, or they may be only semi-liquid. Again, at the first, there may be no diarrhea; there may even exist costiveness, but this is by no means usual. If the bowels have been costive at first, they frequently are affected with diarrhea after a few days, which indeed many times seems to be brought on by the administration of an emetic or cathartic; but certainly many times without either. These dejections may be semi-liquid, or very watery, of different colors,

whitish, greenish—most commonly of the color and consistence of new cider. In a majority of cases, perhaps, not indicating either a deficiency or derangement of the biliary secretion. At least there would appear to be as much bile as is found in dejections of the same degree of fluidity, occurring to a healthy person, if such expression is allowable. These discharges after a few days' continuance of the fever, acquire a very offensive, cadaverous fetor—indeed, at one time I considered this odor peculiar to typhoid fever; but I am now satisfied that I have observed it in other diseases.

Dr. Black, of the Stamping Ground, informs me that he has uniformly seen a deposit of a dark fine powder in these dejections, even before any medicine had been given; I have commonly seen this sediment, but I have always considered it as the black oxide of mercury. I do not think I have ever seen this sediment when no mercury had been taken. I have certainly seen it when none had been taken for several days. I have also seen it frequently in bilious fever, when calomel produced watery stools. It is of course only to be seen when the stools are watery.

For the purpose of determining whether the black sandy looking matter, found in watery stools, is the black oxide of mercury, I obtained some on the 14th May, 1847, from a patient who had taken calomel and blue mass the previous night; I folded the deposite in paper and examined it the next day. Upon opening it I was surprised to see that it had lost much of its blackness; being in fact of a dirty brownish color. It had an evidently gritty feeling between the finger and thumb; when subjected to a microscope of about sixty diameters, it appeared again nearly black, in grains about as large as blasting powder does to the naked eye, and of very irregular shapes. Muriatic acid dropped upon it converted a

very minute portion of it into a whitish powder, (calomel I presume,) but the great bulk remained perfectly unaltered by the acid.

Laid upon the point of a spatula and subjected to the flame of a candle no change took place—no odor was emitted. The grains broke upon being pressed on a tyle, like rather soft sand. Having wasted, in these experiments, what little I had obtained I of course ceased for the present.

As a means of ascertaining the probability of calomel being converted into the black oxide in the bowels, I took some calomel, and subjected it to diluted aqua ammonia of different degrees of strength. The articles were those which I had in the shop at the time, the calomel being hydro-sublimed. By dropping the solution on the calomel, the intensity of the black color produced, diminished progressively from one part of aqua ammonia to four of rain water at which I commenced, to one part in five hundred and twelve, at which it became of an ash color. But calomel put into a solution of $\frac{1}{1024}$, and shaken gave a decided color much darker than hydrarg. cum creta. Put into a solution of $\frac{1}{4096}$ it became of an ash color. The oxide, reduced by all these processes, was as might have been expected an impalpable powder, exhibiting no appreciable bulk under the microscope.

This experiment has proved to me that although the black oxide of mercury may be found in the bowels, this particular deposit is not it.

The diarrhea continues more or less strongly marked, generally until convalescence is perceptible. After some days, we have occasionally a few points of pus or mucus, sometimes tinged with blood, and sometimes not. Occasionally a case occurs, in which there is a large quantity of mucus unmixed apparently, with anything else. Sometimes the stools are more consistent and of a dark green

color, they differ however from the *bottle green* stools produced in bilious fever, by being of a brighter color and more glossy appearance.

As improvement takes place, the dejections become very gradually of more consistence, and very soon there are observed very small particles of well elaborated feces, of about the natural consistence, mixed with the yet liquid stool. The dejections may become less frequent and of greater consistence however, without there being any improvement of the patient. It occasionally happens there is but one liquid stool a day, and it may be that an injection is necessary to produce that. It may be that after the continuance of diarrhea, for a considerable time, the bowels become costive rather suddenly. I saw a case of the kind last summer, and when we moved the bowels by injection, the feces were of the consistence of health, and of a color which would have been produced by having eaten heartily of stewed dried peaches.

During the continuance of the fever, it occasionlly happens that a worm is discharged from the bowels, and as children are very apt to pick their noses and lips, it is sometimes supposed they are troubled with worms; and vermifuges are given for their expulsion; rarely with any success. There is however no reason why children infested with worms may not be attacked with the fever; and it sometimes happens that considerable quantities are eliminated.

Towards the latter stages, considerable quantities of blood, are sometimes evacuated by the bowels. It is a little singular, that, according to my experience, this symptom is confined very much to particular families. Thus in one family in which there were two cases, it occurred in both. In another, where there were nine cases, it occurred in four. Besides these six cases, I do not think that during the last six years, I have seen more than two or three instances of it.

Sec. 4. *State of Abdomen.*—Connected with the diarrhea I will make a few remarks as to the abdomen, as observed externally. There is tenderness upon pressure usually observed at the epigastrium, and especially at the right iliac fossa, there is very commonly more or less distension and tympanites of the abdomen. This tympanitic condition is not at all removed by the evacuation from the bowels, even when, as sometimes happens, there are enormous quantities of flatus discharged with the feces. On the contrary, the distension is, in many cases, in direct proportion to the amount of diarrhea, increasing as that increases, subsiding as that subsides. There is however no necessary connection between them, as in some cases there is much distension and little diarrhea, and in others considerable diarrhea and little distension. So there may be tenderness without distension, or distension without tenderness of abdomen. Again, there may be a rigidity of the abdominal muscles, without either tympanitic distension or tenderness, or various combinations of these states. Upon pressure at the right iliac fossa, quickly and suddenly repeated and withdrawn, a gurgling noise is often evident, occasioned by the presence of air and fluid in the bowels at that point. I have observed it before diarrhea had been noticed, but that made its appearance soon afterwards.

ARTICLE 5.

OF THE URINE

There is not usually any marked affection. Frequently it is rather scant. In a very few cases I have observed a suspension for a day or two, and occasionally it is highly colored and turbid. I have lately seen one case in which

no urine was discharged for six weeks, except by introducing the catheter. I have seen one case, in which it was mixed to a very considerable degree with blood; and another in which stranguary occasioned by the application of a blister, gave rise to the expulsion of bloody urine with a coagulum as large as my little finger, and an inch and a half long. Stranguary in a very few cases comes on spontaneously.

ARTICLE 6.

STATE OF THE SKIN.

SECTION 1. *Heat, Dryness, &c.*—During the first few days of the disease, there is usually an evident increase of temperature, especially of an evening, at which times the face, sometimes both cheeks, sometimes only one, is more or less flushed. This redness of one cheek, shifting over to the other is noted by Dr. N. Smith as a symptom of the disease. I do not remember to have noticed its being given as a symptom of any other disease. It certainly appears in typhoid fever; but I have seen it much more frequently in bilious fever, and especially in bilious pleurisy. It was a very general, almost universal symptom in those diseases from October to March, in that part of southern Kentucky in which I lived, from 1820 to 1833: when there was much febrile excitement, both cheeks were generally, not always flushed. There was no necessary connection between arterial excitement, and the flushing of one cheek. On the contrary it seemed particularly whimsical in its appearance. Sometimes one cheek would be intensely red, even to a shade of purple, whilst the other was ashy pale; with no other symptom of excitement—anon, that cheek would become pale and the other flushed. Sometimes it would be only on the

cheek; again, it would embrace the ear and run up to the median line of the nose its whole length, but not pass over it at any point, giving the countenance a very odd appearance. The skin is usually dry, rarely harsh. After five or six days the increase of temperature upon the surface generally, is scarcely to be observed. In many cases the temperature is natural or even less than natural. There is a very decided tendency in the knees and feet to become cool.

Sec. 2. *Rose Spots.*—I have never seen what I considered the "*rose colored lenticular spots,*" the typhoid eruption of Louis and Bartlett. I have seen petechiæ in the last stages usually a short time before death. Lest it should be supposed that this eruption has escaped my observation, because of negligence, I will state here, that I am fully confident of having used all due diligence. I have examined the body myself in cases of males, every day during the whole course of the disease. In female cases, I have had them examined in the same manner; and that in no few instances, until I became perfectly satisfied that it is an extremely rare occurrence in this vicinity. I have made the eruption, the special subject of conversation with many of my medical friends, and have never found one who had seen it, if the eruption upon the neck and face as described by Dr. Gano, before noticed, was not of that character. On the contrary, many of my friends have expressed their surprise that they had never observed it, though repeatedly sought for. Dr. Emison who saw this eruption in Philadelphia under Gerhard, and who is satisfied that when once seen it could not readily be mistaken or overlooked, has failed in discovering it. Dr. Prewett who had abundant opportunity to see this eruption in Boston, and who resides about twenty miles south of this, has seen but one case marked by this eruption. He, however, has seen but five or six cases since his return to Kentucky.

I have spoken of rose spots and petechiæ, and it may

be well to define what I mean: By *the rose spot* is understood a small round or oval spot, about a line in diameter, very slightly yet perceptibly raised above the adjacent skin, and of a bright red color; usually appearing successively during the second week, and continuing about a week; disappearing under pressure, and returning immediately; finally fading gradually without desquamation — generally not very numerous. Seated commonly on the breast and abdomen; occasionally upon the limbs. By *petechiæ* I mean dark red spots of different sizes, from half a line to two lines diameter, of irregular shape, though commonly round, not elevated; not disappearing on pressure, being in fact minute ecchymoses; usually numerous; situated on the body and extremities.

Since writing the above, I have been informed by Dr. Evans, who lives twelve miles north of Georgetown, that he has found the rose spots in about one half of the cases in his practice.*

Sec. 3. *Sudamina.*—I have found *sudamina* rather frequently; being present in perhaps a third of the cases. It is successive in its eruption, and goes off by leaving very thin scales. I have seen this eruption continued for several weeks after restoration to health, but most commonly it disappears about the time when convalescence is well established. I have seen one case at least, in which it did not appear until the patient was in *articulo mortis;* at least, I examined for it in the afternoon without finding

*July, 1850, I have seen within the last three weeks a crop of rose spots. It appeared upon my son, twenty-five years old, who had an attack of the fever in the early part of 1849, and another in the latter part of May last. He had recovered from this so far as to be able to ride for about a week, when, from indiscretion in eating, he had a relapse during which the rose spots appeared and continued four days, not more.

it; but at midnight I found the patient dying with a plentiful eruption upon the neck and lower part of his face.

Sec. 4. *Desquamation of the cuticle* has been observed something more frequently than sudamina. The scales of this desquamation are too large to have been occasioned by the debris of the sudamina. The first case which exhibited this symptom, was in a negro, and I was under the impression that it was the consequence of the rose colored lenticular spots, which the color of the skin had prevented my detecting; but in addition to the fact that I have not seen scales mentioned as a sequel of these spots, subsequent observations have satisfied me, that this symptom occurs frequently independent of any preceding eruption. Its most frequent seat is the chest and back, especially about the loins and sacrum.

ARTICLE 7.

RESPIRATORY SYSTEM.

Thoracic symptoms of a grave character I have rarely observed. I have frequently seen a short dry cough, such as is usually denominated stomach or worm cough. Occasionally there has been a slight rhonchus in respiration. There is frequently a somewhat hurried respiration. Towards the termination of fatal cases, the respiration becomes more irregular and sometimes hurried. The irregularity often is more marked in a sudden expiration than in anything else.

ATRICLE 8.

SEQUELÆ.

I have seen phthisis follow speedily upon typhoid fever in several instances. I have seen a very decidedly edematous condition of the face and limbs succeed the fever. This is most apt to be the case when a sufficient restraint upon the appetite has not been imposed. After severe attacks of this, as of other fevers, it is usual to have a considerable loss of hair. In three instances I have seen this amount to almost complete baldness, the patient losing every hair of his head, though not precisely at once. There is frequently considerable desquamation of the cuticle; but never to a degree so marked as occurs after scarlatina. I have seen one case in which a very painful affection of the tibia, accompanied by some tumefaction of the integuments, which also were exceedingly tender to the touch. A gentleman of my acquaintance had a very painful swelling of the leg: after the disappearance of the pain, the limb remained permanently enlarged.

I do not know that there is anything very important in these observations. I have not seen phthisis occur, except in persons strongly predisposed to it before the attack. We occasionally see an edematous condition of the body, or an inflammation of some particular part of the body (in popular language, a settling of the fever) follow bad cases of fever of any kind. I do not know that they are more apt to follow typhoid than other fevers. It seems to me that inflammation about the parotid gland has been less common than after bilious fever or dysentery, to say nothing of scarlatina.

REVIEWS.

Art. II.—*A Systematic Treatise, Historical, Etiological, and Practical, on the Principal Diseases of the Interior Valley of North America, as they appear in the Caucasian, African, Indian, and Esquimaux varieties of its Population.* By Daniel Drake, M. D. Cincinnati: Winthrop B. Smith & Co. Philadelphia: Grigg, Elliott & Co. New York: Mason & Law. 1850.

We have already announced the publication of this work and briefly expressed the high estimate we have formed of its merits. The most cursory examination is sufficient to show that it is the fruit of more patient investigation, of more mental and bodily toil, of more extensive and varied research than are often devoted to books at the present day. The work indeed has been long on hand. Forty years ago, while a young man and still an undergraduate in medicine, the author published the germ of it in a pamphlet entitled "Notices Concerning Cincinnati;" an effort which gave proof of those fine powers of mind which are so remarkably displayed in the volume before us. As long ago as t! irty years, Dr. Drake informs us in his preface, he "formed the design of preparing a more extended work on the diseases of the Ohio valley;" and not long afterwards his purpose was made known to the public. During the years that have since elapsed, although much engaged in the practice of medicine and engrossed by the politics of his profession, he has never lost sight of his early enterprise. Amid all the revolutions of medical schools in which he has borne

a conspicuous part, his plans in regard to this great labor have remained unchanged. The "image" of the institution founded in his youth, in his favorite city, and by his efforts, which has pursued him in all his journeyings, and haunted and made him restless in all other institutions—an image beckoning him still to return to his early home and still disappointing him—has never succeeded in diverting his thoughts wholly from his cherished work. Fortunately for his fame and the interests of medical science, amid every distracting care, and through the unquiet life of a medical politician and pioneer, this noble object has been kept steadily before his mind.

It was about nine years ago that Dr. Drake set seriously by travel and personal observation and inquiry about collecting the materials for his treatise. Connected at the time with the medical school at Louisville, he enjoyed in its long vacations the leisure requisite to the tedious journeys which the plan of his work rendered necessary. In the spring of 1841 he commenced a series of excursions which were continued through a number of years. Early in that year he descended the Mississippi to New Orleans, crossed over to the bays of Mobile and Pensacola, and inspected the medical topography of those interesting regions. In the ensuing spring he made a second voyage down the Mississippi, on this occasion extending his observations as far as the Balize. Much time was spent in the city of New Orleans collecting facts relative to the diseases to which that great Southern emporium is subject, and, returning, he penetrated into the State of Mississippi in various directions, as, during the former year, he had done into Alabama. Later in the season he ascended the Tennessee, Ohio, Missouri, and upper Mississippi rivers far towards their sources, and inspected the localities on each most interesting to the medical topographer. From year to year similar excursions were made until he had taken a general survey of

the great valley, from the mouth of the Mississippi to the mouth of the St. Lawrence, and from Pensacola Bay to Lake Superior. It was an object with the author to converse with medical men, as well as to see medical topography, and to collect from them the results of their observations in reference to the diseases of their several countries, thus rendering his work a summary of the professional experience of the interior valley.

From this narrative it will be seen, that Dr. Drake has laid the best possible foundation for such a work as the one he has long meditated. He has seen the country, the diseases of which he is to describe, in all its aspects and in every stage of culture and civilization. He was careful to visit all the barracks in his line of travel, where he might see men congregated in numbers, and collect the most reliable statistics relative to their diseases; he visited the plantations in Alabama, Mississippi, and Louisiana for the purpose of learning what there was peculiar in the complaints of the unmixed African race; and he also went among some of the Indian tribes to observe how far disease is modified by the primitive habits of savage life. In addition to this, he has drawn from the observations of other travelers in remote parts of the valley not explored by himself, so that his treatise will be found to embrace a description of the medical topography of the country, from Vera Cruz to the regions around Hudson Bay.

The field comprehended in this survey is an immense and very remarkable one. The interior valley of North America spreads through fifty degrees of longitude and forty of latitude, from the Appalachians to the Rocky mountains, and from the Gulf of Mexico to the Polar Sea. It embraces every variety and extreme of climate, of surface, of geological formation, and, among its inhabitants, nearly all the varieties of the human race. Over a wide space its surface is but little raised above the level of the ocean, but it is overlooked by mountains which pierce the

line of perpetual congelation. Broad regions are covered by ponds and marshes, while interminable planes of arid sand are spread out over other portions of it. Beginning at the Gulf with the most recent alluvion, its formations run through every geological era up to the primitive rocks. Stretching from zone to zone, it has the temperature of the tropics and of the arctic circle. Many thousand miles of its surface reposing under a tropical sun are hardly above the tides of the Gulf, but advancing North it presents an Alpine region extending through many degrees of latitude, with a mean elevation of more than two thousand feet above the level of the sea. It is traversed by the longest river in the world, and contains the most extended chain of lakes. Within its bosom are found the Falls of Niagara and the Mammoth Cave.

A picture of so vast and diversified a region could hardly fail to prove interesting, and, if faithfully and ably executed, must be interesting and instructive to medical men in an uncommon degree. At the same time, to take in all the physical features of such a country, to compare its topography in different latitudes and under all the circumstances which influence disease, to determine the laws of its climate and the conditions under which its endemic disorders arise, and finally to give an accurate description of those disorders and the most successful mode of treating them, will be admitted by all to be a task of no ordinary magnitude. This is the task which Dr. Drake, during the greater part of his life, has had in contemplation, upon which he has entered in the volume before us, and has accomplished, as we have already said, with eminent success. It was to present a work on the diseases of the interior valley the materials of which should be collected in the valley itself, that he has been so long making preparation. It was never any part of his scheme to compile a treatise out of the labors of other authors. It has been his design to give in his book what he has himself

observed and tried, and what has been sanctioned by the experience and fallen under the observation of the physicians resident in the co ntry to which his work relates. With such a purpose, it was to be expected that his production would contain much that was peculiar and distinctive; not only much that was new in matter, but something original in its plan and arrangement. It was to have been expected that it would depart widely from the ordinary systematic treatises, which every year adds to the stock of our literature on the practice of medicine, and a little examination will prove that such is the fact. We propose to point out some of its most characteristic features.

The first of these that we shall notice is the attention given by Dr. Drake to the relations of geology to medicine. In the numerous pages of his work strictly introductory to the consideration of special diseases, he has constantly indicated these relations. Very justly he regards mineral geology as the proper basis of medical topography, and he is the first systematic writer on medicine who has given prominence to this fact. Upon the nature of the surface of a country is well understood to depend, in a material degree, the health of its inhabitants, or the reverse, and the character of its surface is dependent upon the stratum of rocks upon which it rests. Where the formation is a sandstone, the country is rolling, hilly, mountainous, comparatively arid, and sterile; its streams are clear and have good currents, and it is free from ponds and stagnant water. On the other hand, where clayslate constitutes the substratum, the land is level and retentive of moisture, in consequence of which accumulations of water occur. It is the region of ponds and marshes—the region of intermittent fevers. A limestone formation is the one most favorable to fertility of soil, and is found as the basis of countries remarkable for their fruitfulness. The surface, where it constitutes the

prevailing rock, is covered with a luxuriant vegetation, and if clay enter freely into the composition of the superincumbent soil, ponds are formed. There are local exceptions to these rules, but such will be found to be the general law. Its bearing upon etiology need not be pointed out. When the physician is informed that the geological structure of a country is marked by one or the other of these characters he will be able at once to say what are its chances for health. All medical experience goes to the point, that countries in which sandstone is the prevailing rock are healthy—that districts resting upon slate, temperature and other circumstances favoring, are subject, especially, to fever and ague—and that rich limestone regions are the favorite abodes of autumnal fevers.

Geology is a science of modern origin. A few years ago it was in an embryonic condition. Its vocabulary was not settled and it was without system. But light and order have been infused into it by philosophers still living; its language has become precise and intelligible; great leading principles have been fully established and are now universally recognised and accredited. A parallelism has been traced between the formations of Europe and those of North America, and now when a geologist in Indiana or Kentucky alludes to a particular system, he is as well understood by his brethren in London or Paris as if he were writing to them from one of the neighboring counties or provinces. The strata which compose the earth have a regular order of sequence which is never reversed. The system which lies at the bottom in Russia is the foundation upon which the various systems repose in New York and Tennessee. A particular series may be absent, but it is never dislocated, unless by violence, as in the case of mountains where the strata are occasionally found displaced and contorted in all directions.

The geology of the great intermontane plane of North

America is marked by great simplicity; its formations are few and well defined. The primitive and metamorphic rocks—granite, gneiss, porphyry, mica-schist, syenite, &c.—are seen in a few places only, brought to the surface by upheaval, and upon these rest the lower Silurian series of rocks, to which succeed with great regularity the upper Silurian, the Devonian, and the Carboniferous, with which, over a wide district of our continent, the formations close. In some places the Devonian strata thin out until they can hardly be recognised; in some, one member, and in others another of the Carboniferous system is wanting. To the Devonian, in some regions, the Chalk formation succeeds, and over a wide tract the Drift formation rests upon Silurian strata, the carboniferous series being absent. But the particular series is easily made out by any one slightly acquainted with paleontology wherever the rocks come to the surface.

As a general, almost universal rule, the Silurian rocks of the interior valley are limestone, which, however, varies much in its lithological characters, in some cases being hard, compact, and durable, while in others it is soft, friable, and readily disintegrated. In one place the same series of limestones, containing the same fossils and belonging evidently to the same geological age, are readily worn down by the weather and have formed a deep, rich soil, and in another are so solid that they yield scarcely at all to the chemical and physical action of the atmosphere, and are scarcely covered with the most scanty soil. Perhaps no other rock is so variable in its minerological character as the limestone.

The Devonian system embraces limestones and clay-slate. This series thins out towards the South, but attains to great thickness in the North-western part of the valley.

The Carboniferous system embraces every variety of rocks—sandstones, limestones, and conglomerate—and,

as the name imports, is the series in which bituminous coal is found. It begins with a fine grained sandstone, and ends with the coal series. The limestone of this system is that which forms the substratum of the barrens in Kentucky, and is the one in which the Mammoth Cave occurs.

Dr. Drake, in his medical topography, refers continually to this classification of strata and notes everywhere the formation constituting the surface-rock, specifying, at the same time, its mineralogical character; so that we know, when we have finished his description of a place, not only the geological age of the country, but whether its beds of stone are sandy, slaty, or calcareous. As the nature of the water is determined by the mineral strata over which it runs, we have only to inquire whether the prevailing rock at any point be sandstone, slate, or limestone, and we are at once informed whether the water is pure, or impregnated with mineral matters. Here we have the *telluric* element concerned in the elimination of diseases, and it has never anywhere else been as distinctly and fully recognised and as clearly pointed out as in this treatise.

To appreciate the bearing of mineral geology upon etiology, one has only to review the progress of cholera through the United States, either in its former or its present invasion, in both of which it will be found to have been remarkably under the influence of telluric as well as climatic agencies. At Quebec and Montreal, where the epidemic first touched our continent in 1832, the formation belongs to the lower Silurian. The same formation, together with limestones of a later era, prevails throughout a large portion of the State of New York, over which the pestilence swept with great violence. St. Louis is built upon carboniferous limestone. At Cincinnati, Lexington, Versailles, Nashville, Shelbyville and Lebanon, Tennessee, the lower Silurian limestone is the surface

rock. At other places in the valley of the Mississippi where cholera has been most malignant, as at Sandusky and other towns in Ohio and in Indiana, the formation is of the Devonian era, but is still a limestone. In a word, limestone forms the great pan of the valley, and it is known that the epidemic has prevailed with a greater fatality here than anywhere else in our country. Except at New Orleans, the towns in Mississippi and Louisiana, and the cities on our Atlantic border, limestone, we believe, constitutes the basis of every soil in which cholera has revelled on the northern part of our continent. So far as our knowledge extends, it has no where prevailed with virulence in a sandstone district. Its chosen seats appear to have been limestone and alluvial soils.

We wish it to be distinctly understood that we do not mean, in saying this, to intimate a belief that limestone—much less that *limestone water*—is the cause of cholera. We do not allow the slightest weight to this hypothesis, but the facts to which we have referred have their value, and cannot be overlooked in our search after the cause of the epidemic. This telluric agency is one of the factors, and can be no more omitted in the estimate than the climatic. The earth and the atmosphere both seem concerned in the elimination of the peculiar poison; they furnish the two elements necessary to the result.

After all that we have said we need hardly add, that we consider this feature in Dr. Drake's Treatise a very important one—one possessing practical as well as philosophical interest—and that in thus developing the connection between etiology and geology, the author has set an example worthy of the imitation of future writers on medical topography. Indeed, we feel satisfied that we are only at the beginning of this subject, and that valuable truths will soon be brought to light in relation to it.

We remark further, in reference to the characteristics of this work, that it comprises the most extended and

systematic view of medical topography with which our reading has made us acquainted. The author has not only described the various localities in the great interior valley, but shown their relations to each other, reducing all the parts of this wide hydrographical basin to a unit. The advantages of such a system, over the detached pieces of topography such as have been generally attempted, will appear at once. The reader, when he has completed Dr. Drake's description of the valley, has all its diversified features before him as a whole. He is able to compare its extreme southern, with its middle and extreme northern regions, in respect to disease, and to estimate the influence of elevation upon its endemic disorders. Starting on the shores of the Gulf and at the level of the sea, he may trace the fevers of the country through its changing climates, as it stretches towards the arctic circle and rises above the ocean, until they finally disappear under the rigorous skies of the north. He sees its southern, in contrast with its eastern and northern basins, the valley of the Mississippi, in contrast with the valley of the St. Lawrence, and its low, paludal planes, in contrast with its alpine regions. He has at once under his eye the point of maximum cold for the continent, and valleys swept by warm breezes from the Carribean sea. In short, he has a map of the medical topography of this remarkable region spread out before him—a map to which he will recur, again and again, with never failing interest.

The climate of the valley of the Mississippi has attracted the attention of several philosophers. The celebrated traveler, Volney, from a few brief observations, concluded that it was characterised by a mysterious mildness; and Mr. Jefferson also states that on the same parallel it is warmer than the Atlantic side of the Alleghany, the reverse of which is the fact. Dr. Drake enters with much minuteness into the discussion of the subject. Climate, as we have said, is one of the elements concerned

in evolving the causes of disease, and is therefore a subject of the highest interest and importance to the physician. The soil of itself is not sufficient to develop the poison, however well adapted to it; climate of itself is not capable of generating it—the two must conspire. Arid planes of sand are healthy under the intense fervor of a tropical sun, and in latitudes far to the north marshes lose their pestilential attributes, numerous instances of which are cited in this treatise; the fact, however, required no additional confirmation, for it has long rested upon the common observation of men. But the general study of climate is not sufficient for the practitioner of medicine—he must study the climate to which he and his patients are exposed; for we need hardly say that every country has its own peculiar climate, the laws of which must be determined for themselves. The elements which constitute it vary with the physical geography and other circumstances of the country; and we should no more arrive at a knowledge of the character of the climate of the Mississippi valley by studying the climate of Italy or Russia, than we should at a knowledge of its fauna or its flora by studying the zoology or botany of corresponding regions in Europe or Asia. There is analogy everywhere, but as there is nowhere precisely the same combination of circumstances, so there are no countries in which the phenomena of climate are precisely identical. The climate of this great intermontane plane is subject to remarkable influences. In the first place, the country stretches, without a mountain barrier to deflect its winds, from the torrid to the frigid zone. Subtending it to the south is one of the warmest seas on the globe, and on the north it is bounded by the frozen ocean. On the east the Alleghany mountains shut it in from the winds of the Atlantic, and on the west it is sheltered from the Pacific ocean by the Rocky Mountains, which rise at some points into the regions of perpetual snow. At one time it is warm-

ed by winds from the bosom of equatorial seas, under the genial influence of which frost yields at mid-winter; and again it is chilled by blasts sweeping down from the polar sea over fields of eternal ice. Thus, it is subject to all extremes of temperature, and it is also subject to every extreme of drought and humidity; but yet this climate of extremes and of change has its fixed laws, which only patience and industry, directed by a philosophical mind, are required to determine and expound. Dr. Drake has devoted nearly two hundred pages of his volume to the statistics of this interesting subject, and has here brought together a vast number of facts which he found scattered through the publications of the day. To many readers, it may be presumed, these details will appear tedious, and many it may be will not give them sufficient attention to understand them; but to any one desirous of studying our climate in the light of all its phenomena hitherto ascertained, they form the most ample and trustworthy source of information. It is possible that the subject is given more in detail than was demanded by the wants of most readers; but in its principal facts and general deductions every one must be supposed to feel some interest. The subject is evidently a favorite one with our author, and no part of his work is elaborated with more care than that relating to the climate of our valley.

Dr. Drake has taken a comprehensive view of the *hygiene* of the interior valley, and this will be found to be another important feature of his work. The third part of Book I is devoted to this subject, and embraces several points of the deepest interest. Population, its varieties and physiological characteristics, statistical physiology, the diet, clothing, and habits of its people, are some of the topics embraced in the discussion. They belong, as will be seen at a glance, to physiological and social etiology, and have a direct and important bearing upon disease. They are presented in this treatise, not in a

general way, but with special reference to our own country, the facts and conclusions having been derived from the author's own observation. As climate varies incessantly with its modifying circumstances, so there are peculiarities in the hygienic condition of every people. The population of the great valley presents peculiarities in its social state which will strike the most superficial observer. To take but a single example—no people on earth exhibits such a commingling of races. We have four out of the five great varieties of the human species, and we have all the important branches of the variety which stands at the head of the race—the Caucasian. English, French, Irish, Scotch, Germans, Welsh, Hollanders, Swiss, Norwegians, Poles, Spaniards, Swedes, Italians, and Jews, with all their national traits, and all their peculiar social habits, have united here to form one great nation. For a century they have been mingling with each other and with the Aborigines of the country. In time, striking physiological and psychological developments must come from this union of races, for the process is going on every year with increasing activity; it has been going on among mankind in an accelerated ratio from the earliest ages. A law of increasing social amalgamation has governed the nations of men in all their migrations westward, from the sources of the Tigris and Euphrates to the banks of the Mississippi and the shores of our great lakes. The people who flourished at the head of the Mediterranean exhibited a character of much greater complexity than the nomadic tribes that wandered over the planes of Chaldea. When the tide of human life had reached Rome, its diversity was still further increased; but the Romans were a homogeneous people in comparison with the western nations that followed them in the march of civilization. The complexity has gone on deepening among the nations of Europe until some of them have become a mixture of many races; but there is still comparative simplicity

among the people of the old countries. Upon our Atlantic shores a stream of population has been pouring in for centuries, from nearly every nation under the sun, and now it is flowing over into our valley—the union and living coalescence of the nations of mankind having thus been all along "in the direct ratio of time and distance from the birth-place of the species." But the world has been overrun, and this process of amalgamation is hastening to its final consummation; it is to be finished here. As remarked by Dr. Drake:

"The GREAT CENTRAL VALLEY OF NORTH AMERICA is the *last* crucible into which living materials, in great and diversified streams, can be poured for amalgamation. The double range of mountains which separate it from the Pacific Ocean, leave too little space for an empire on the shores of that sea; and the detached communities which may there grow up, will be but derivatives from the homogeneous millions, with which time will people the great region between the Appalachian and Rocky Mountains, which is thus destined to present the last and greatest development of society."

We proceed to mention another characteristic which places this treatise in the first class of medical writings—it is composed of original materials. While this remark is substantially true of all the introductory chapters of the work, it is emphatically so of that portion which relates specifically to disease. The article on *autumnal fever*, making the first part of Book II, consists of facts collected in our own valley. It is indigenous throughout—the work of the author, made up of his own observations, and those of his Western and Southern brethren. It is the first attempt, and an eminently successful one, to exhibit a full view of that disease, in all its forms, by the light of its phenomena as they occur in our country. No part of it is foreign; none is compiled, except from writers conversant with the disease as it exists here.

Now, we are not among those who have shown a disposition to exaggerate the importance of "sectional medicine." We are very far from believing, as some have contended, that in order to practise his profession successfully in the valley of the Mississippi, a physician must be educated in the valley of the Mississippi. Such a view of medicine we cannot help regarding as degrading to the science. In supporting it, its advocates have been guilty of much extravagance, and have put forth much that, not only will not stand the test of observation or sound logic, but that could hardly have been written seriously. At the same time, while we believe this, we take it to be a truth indisputable, that local soils and climates often engender peculiar maladies, and always modify their endemic disorders. Every country has its specific vegetables and animals. Corresponding zones of different countries exhibit striking analogies in their fauna and flora, but in only a few rare instances, specific identity. Something like the same, it can hardly be doubted, prevails with respect to disease; and if so, it follows that they who have been longest and most intimately conversant with the endemics of a country are best qualified, other things being equal, to write its medical history. No one will deny that a monograph on the plague, written by an observer on the banks of the Nile, would be more likely to exhibit a faithful and graphic picture of the disorder, than one written from hearsay or compiled from books. There is no one who would not prefer a history of yellow fever from the pen of a physician of New Orleans, who had been familiar with the epidemic in all its aspects, to one composed by a physician of Boston or Paris, who had never seen the disease, however learned and able he might be. Much of the value of Sydenham's works—we might say their chief excellence—consists in his faithful description of the epidemics which passed under his eye; and it will not be questioned that those por-

tions of the writings of Dr. Rush which promise to live longest, are his admirable histories of yellow fever as it prevailed in Philadelphia.

This element of freshness and fidelity will impart an abiding interest to Dr. Drake's account of autumnal fever—the fullest, the most methodical and complete hitherto given of that disease. As the *type* disease of the valley it is treated of at much length, in all its varieties, and in reference to all the circumstances under which it originates. This fever is universally recognized as a disease of climate, but it was never before so clearly exhibited in its climatic relations, as it is in the work before us. Dr. Drake has traced it from zone to zone, showing that while its base is within the tropics its prevalence, owing to local causes, is sometimes greater at points farther north, but that it declines with much uniformity under a decreasing summer temperature, until finally it ceases to be an endemic of the country. For example, at the military post at Key West, north latitude 24° 33′ the annual number of attacks for a series of years among 1,000 men, is shown to have been 190; while at Fort Brooke, in north latitude 27° 57′ the number was 849; at Fort King, 29° 12′, 1,387; and at Fort Jackson, 29° 29′, 1,600. At the New Orleans barracks, the number of attacks, among a like number of men, was 544; while at Fort Wood, nearly a degree further north, the number was 1,063; at Fort Pike, north latitude 30° 10′ the number of attacks was 232, and at Baton Rouge, some minutes further north, 824; at Fort Mitchell, north latitude 32° 19′ the number was 225, and 1,265 at Fort Towson, in north latitude 33° 51′, and 1,161, at Fort Smith, two degrees further north. But at Fort Howard, north latitude 44° 40′, the number declines to 84, at Forth Snelling, nearly the same latitude, to 62, at Fort Brady, one degree north, to 44, and in Lower Canada, in about the same latitude, to 27. Finally, from all the observations made by Dr. Drake, it

would appear that the geographical limits of autumnal fever are reached, at the level of the sea, about north latitude 47°.

It is a curious and interesting fact observed by naturalists, that ascending forest vegetation corresponds with the distribution of trees over the temperate zone; or, in other words, that elevation is equivalent to recession from the equator. The order in which the families of trees appear as we go north over the temperate zone, is the order in which they are presented as we ascend the sides of mountains—first the Juglandeæ and Amentaceæ, then the Acerinæ, and finally, towards the summits, the Coniferæ. Nut-bearing trees are proper to temperate regions; maples predominate in climates more rigorous, and pine forests are the last that disappear under the increasing severity of northern skies. In regard to febrile diseases the same law seems to hold; latitude and elevation bring about the same results. Yellow fever is an endemic of equatorial regions; it is also occasionally seen in the temperate zone, at the level of the sea. As we recede from the equator, and rise above the level of the sea, we leave it behind us. Philadelphia and New York were once subject to it, and they now suffer with other forms of autumnal fever, but in the mountainous villages in the same latitudes, remittent fever prevails only to a limited extent, and intermittent fever is nearly unknown. All the favoring circumstances of marsh and decaying organic matter fail to originate autumnal fever at the forty-seventh degree of north latitude; and the same combination of causes is insufficient to its development on the summits of elevated mountains.

The work before us contains many facts illustrative of this law, one of which is so striking that we shall here present it in detail. The basin of the Genesee river, in latitude 43° N., furnishes all the geological elements necessary to the origin of autumnal fever, and the testimo-

ny of medical men is that it has been visited, in times past, by fevers of a malignant character. "Genesee fever" was, in the earlier years of the settlement of the country, a familiar appellation. With the progress of agriculture, the disease has become less frequent, but sporadic cases continue still to occur, every year, in the depths of Rochester, the largest city in that basin. The Genesee river descends from the mountains in a southernly course towards the Lake. Its head streams issue, with those of the Cataraugus, Alleghany, and Susquehanna, from a summit-level where frost occurs regularly in June and August, and not unfrequently in July. In visiting this region, Dr. Drake "saw many fields of Indian corn that had been frost-bitten on the night of the third of August;" and in passing north to Lake Ontario, he met "the scythemen, who had completed the harvest in the country below, advancing south, and mounting on the higher level, to continue their labors."

"In ascending this mountain slope, although we go directly south, we find that the fevers which prevail on the flats below, and down to the shores of Lake Ontario, get less and less. They prevail more along the Genesee River, and for a short distance up its tributaries, than elsewhere; but at length are almost unknown in every kind of locality, even the most paludal. At the village of Pike, on the banks of the transparent West-Koy, six or eight miles from the Genesee River, and at an elevation (by estimate) of twelve hundred feet above the sea, Doctor Capron, who had resided there twenty-eight years, assured me they were unknown; adding, that the stream abounded in *trout*, a certain sign of exemption from that disease. Cases of remittent fever, however, now and then occur. Doctor Minard, of the same village, confirmed these statements; but informed me that both intermittents and remittants occur. to some extent, near the junction of the West-Koy with the Genesee, and, also, on the corresponding portion of a neighboring tributary, Cole Creek.

"The summit-level on which the Genesee, in common

with the Alleghany River, originates, lies between 42° and 42° 30′ N. latitude, and has an elevation varying from thirteen hundred to sixteen hundred feet. It is about one degree farther south, and twelve hundred feet higher than the shores of Lake Ontario, between the mouths of the Niagara and the Genesee Rivers. Now, an autumnal fever, especially the intermittent variety, is the principal endemic of those shores, but almost unknown on this platform; and the difference must be ascribed to altitude, as swamps, streams, and organic matter abound in this region."

Four fifths of this large volume, or about seven hundred pages, are devoted—and in our view judiciously devoted—to Etiology—first, and most largely, to *Topographical and Hydrographical Etiology*, second, to *Climatic Etiology*, and third to *Physiological and Social Etiology*. Some readers, doubtless, will weary of the protracted details given under these several heads; but what subject, we desire to know, has higher interest for the physician than general etiology—the study of man's relations to the earth, to the air, and the food, drinks, and clothing by which he subsists? It is the philosophy of health—of living long and comfortably. The efficiency of the healing art, we have the fullest persuasion, is destined to a great improvement in the line of Therapeutics, but, unquestionably, among the greatest benefactions that medical science has yet conferred upon the race, have been the gifts of Hygiea. Very much remains to be done in perfecting our remedial measures, and our faith is great in the future of curative medicine; but we believe that not less will be accomplished for the amelioration of human health and the extension of human life, by Etiology—the study of the diversified causes of disease. We have thus far found it much better to prevent than to cure small pox. When we shall have ascertained the cause of cholera, and all the circumstances that go to develop it and give it intensity, who can doubt that we

shall achieve more by averting or removing it than we are likely ever to do by all the resources of the apothecary? We have already taken an important step towards the prevention of autumnal fever in having ascertained with so much certainty the conditions which give it origin. How much has been done to dry up the sources of disease and increase the average duration of human life in cities by attention to the principles of hygiene in draining and ventilation, so that the mortality of some of them is now not so great, in times of pestilence, as it was, in centuries past, during the healthiest seasons! How much greater will be the chances of life and how much higher the sum of its enjoyments, when the laws of hygiene shall have come to be generally understood and respected!

This is evidently Dr. Drake's way of thinking; he is one of the writers on practical medicine who have wisely given to Etiology the prominence it deserves. It has been his habit to take enlarged and philosophical views of medicine. We remember well a course of lectures delivered by him on the practice of physic to which we listened with great pleasure, a good many years ago, and which we admired especially for its deep and broad foundation laid in general pathology. If our memory is correct, he devoted more than a fourth of his course to preliminary views; nor shall we soon forget how irksome—how "stale, flat, and unprofitable"—they proved to not a few of his auditors. Day after day we remember to have seen assiduous students repairing to his lecture-room, note-book in hand, prepared to write down his teachings, but after listening in vain for the first fifteen minutes of the lecture for something *practical*—for some formula or specific—they would shut up their books in despair and sit for the remainder of the hour in listless vacuity. If his book should fall into the hands of any readers as wanting in taste for the general principles of medicine, we can

hardly hope to have their concurrence in our estimate of its merits.

We believe it will not be denied that the range of professional studies, in our country, however liberal it may be in theory, is practically too limited, and that the tendency of the times is to limit it more and more. We are disposed to make medicine too technical—too much a thing of recipes. The period of study has been wonderfully abridged, and there is danger that we are also abridging the extent of our studies. We hurry through the elements to reach practical medicine. The science is not properly appreciated, and we attach undue importance to the art, the consequence of which is that the former is not thoroughly mastered by pupils, and is generally neglected and soon forgotten by practitioners. Now, we would ask, is not this one cause of that want of elevation in the profession of which we hear so much complaint in our day? Would it not be well if students were required to add some other elementary branches to anatomy, physiology, and chemistry, and to make themselves proficients in these before entering upon the study of the practice? Would not the benefit be great of making Etiology a part of the course for students? Besides the practical knowledge derived from it—the acquaintance with the sources of our physical maladies gained, and the means of warding them off—it would favor habits of observation, the most valuable in a physician, and inspire more enlarged and liberal views of medicine. The effect of such an extended course of study would be to make medical philosophers, instead of, what is too often the result of the present system, mere routine practitioners.

But we must leave these general reflections, which have been suggested by the perusal of Dr. Drake's work, and proceed to give a more particular account of its varied contents. As we have already remarked, the first seven

hundred pages of the volume relate to Etiology. First, the boundaries, area, and aspects of the valley are given, after which follows a view of its hydrology. The hydrographical system of this region embraces seventeen axes, to which nearly all the rivers of the continent may be referred. That which gives origin to the Mississippi river is first in importance, for in it rises also the no less remarkable stream which, in its course, expands into the great northern Lakes, and is precipitated over the celebrated Falls of Niagara; to reach the sea under the name of the St. Lawrence, having been, at various points, the St. Louis, the St. Mary's, the St. Clair, the Detroit, and the Niagara river. The Mississippi lies in the trough or synclinal axis of the valley, through a distance, following its sinuosities, of nearly three thousand miles, or more than sixteen degrees of latitude. This trough, Dr. Drake supposes, was excavated by a wide and deep current, which flowed across the continent from the north, and of which Lake Traverse and Big Stone Lake are but chasms or hollows, left filled with water when that river ceased to flow. This great aqueduct is separated from those which drain the valley north and east by so slight an elevation that, in times of flood, canoes have passed from one into the other. Dr. Drake gives the following illustration of the fact:

"Two voyagers might start from the Gulf of Mexico, in the latitude of twenty-nine degrees north; and ascending the Mississippi to the mouth of the Illinois river, one of them might take the course of that stream; pass into the Lakes, over an elevation of six hundred feet; descend the St. Lawrence; and make his exit into the Atlantic Ocean, upon the fishing banks of Newfoundland; twenty degrees north and thirty degrees east of his place of departure. The other, continuing up the Mississippi and over the Lake Traverse summit level, at the hight of nine hundred and seventy-five feet, would descend into Hudson Bay; whence he might pass into the polar seas,

amid perpetual ices; after having traversed more than forty degrees of latitude."

A notice of the geology of the great valley follows the description of its geographical and hydrographical system, but having already given a sufficiently full account of this part of the work we pass on to other topics.

The valley is subdivided into four great basins; one containing the Mississippi river and its tributaries, which Dr. Drake denominates the Southern, or Mexican; another embracing the Lakes and the St. Lawrence, which he calls the Eastern or St. Lawrence; a third which holds the waters flowing into Hudson Bay, the Hudson basin; and the last, the Polar basin, which includes the northern sea coast of the continent, from Baffin Bay to the Rocky Mountains. The first is the most important in a medical point of view; it stretches quite across the valley, and belongs chiefly to the United States. The St. Lawrence is set into one side of the valley. Next to the Southern, it contains the largest population, and is most interesting to medical men; it is divided almost equally between the United States and Great Britain. The Hudson, like the Mexican, extends across the valley; in population it ranks third; it lies principally within British jurisdiction, but a portion of it projects into the United States. The whole of the Arctic basin appertains exclusively to Great Britain. Its inhabitants are the Esquimaux—the Mongolian variety of the denizens of the great valley—and are remarkable for living in a lower temperature than any other known portion of the human race.

Having given this general description of the region, Dr. Drake next goes on to present an analysis of the several topographical basins, beginning with the Southern. It would be in vain to attempt to condense any further what is already given in the briefest form compatible with clearness; we shall not therefore pretend to

make an abstract of his topography, but merely notice a few of the conclusions at which the author arrives under this head.

In closing his description of the Bay of Pensacola he States the following facts bearing upon the origin of fever:

"The yellow fever has been several times prevalent in the town, among the shipping, and at the Navy Yard; but the number and malignity of its invasions bear no comparison to its severe visitations of Mobile and New Orleans.

"Of autumnal intermittent and remittent fever, it will be proper to speak more extensively. From the forts to the town of Pensacola inclusive, (all on the west side of the Bay,) although there are some swales and small swamps or ponds among the sand dunes, and some narrow tracts of salt marsh, there are, as we have seen, no deposits of silt; and the organic matters accumulated in the wet or paludal spots, are chiefly those which belong to the pine forest. Now the inhabitants of this range of coast have for a long time enjoyed an exemption from autumnal fever, remarkable for a southern locality. The town of Pensacola has even been resorted to as a summer residence by citizens of Mobile and New Orleans. When, however, we ascend the same coast, about ten miles above the town, to the estuary of the Escambia River, we find a state of things entirely different. The silt brought down by that stream, has filled, as we have seen, a large portion of the western head of the Bay, and thus generated a marsh, several miles in width, near which the settlers have been fatally scourged by autumnal fever; although they escaped yellow fever when it prevailed in the town and Navy Yard below."

He then quotes from Lind the history of an attempt to settle this devoted locality eighty years ago: Lind says:

"In the year 1766, sixteen French Protestant families, consisting of sixty persons, were sent, at the expense of the English government, to West Florida. The ground allotted for their residence was on the side of a hill, sur-

rounded with marshes, at the mouth of the river Scambia.* These new planters arrived in winter, and continued perfectly healthy until the sickly months, which in that country are those of July and August. About that time eight gentlemen (from one of whom I received this account) went to this new settlement to solicit votes for the election of a representative in the general assembly of the province; by remaining but one night, every one of them was seized with a violent intermitting fever, of which the candidate for becoming the representative, and another of their number, died. The next day seven other gentlemen came upon the same business to this unhealthy spot; but, by leaving it before night, they escaped the sickness, and all continued in perfect health. Among the French settlers, during these two months the annual fever of the climate proved so fatal on this unwholesome spot, that of sixty persons fourteen only survived; and even those who remained alive, in the September and October following, were all in a very ill state of health; not one of them had escaped the attack of the fever, and most of them died within a few months afterward, from the injury it had done to their constitutions."

Dr. Drake continues—

"No other settlement in this locality seems to have been attempted for a long time afterward. At length, in the year 1832 or 1833, a new attempt was made, by laying off a town, to be called Florida, on the eastern side of the estuary, in the edge of the pine woods. All the pine terraces of the south are proverbially free from autumnal fever; but here the pine lands lie to the leeward, while extensive silt marshes spread out to the windward. Between twenty and thirty wooden houses were built, and tenanted by as many families. Their history, as given by Dr. Hulse, the intelligent and reliable surgeon of the Naval Hospital, and by Mr. Innerarity and Mr. Kelly, old and respectable citizens of Pensacola, may be told in a few words. Year after year, while the inhabitants of the coast below remained healthy, they were assailed by au-

*Escambia.

tumnal fevers of the most malignant character; the spot was at last called a 'Graveyard;' and being abandoned by those who survived, I found, on passing through it in 1843, but two families remaining.

"These well-ascertained facts have so important a bearing on the origin of the autumnal fever, that I have considered them worthy of circumstantial detail. The heat and moisture of the lower and upper portions of this little Bay are the same; but while the former has only a few limited tracts of pine marsh, the latter includes extensive deposits of silt and organic matter; and to them, I think, we are bound to attribute the fatal insalubrity which has been described."

Speaking of the Pine Woods he says—

"Such are the celebrated *Pine Woods*, to the protecting influence of which the people of New Orleans and Mobile commit themselves for safety, in yellow fever seasons; expecting to enjoy an equal immunity from intermittents and remittents. Thus, in the region we are describing, the sweet gum and cypress, with their festoons of moss, are the symbols of deep soil, foul surface, impure water, vegetable decomposition, and fevers; while the long-leafed pine, symbolizes sterility, dryness of surface, gushing springs of pure water, and sound health."

He concludes his account of the impurities of the Mississippi river with the following remarks—

"The salubrity of the Mississippi water, or that of the Missouri which imparts the character of turbidness, is not an open question. From St. Louis to New Orleans, the testimony of the population on its banks, and of those who spend a great part of their lives upon it as watermen, is unequivocally in its favor. Many persons drink it before its suspended materials have subsided, and seem to prefer it to that which has been rendered transparent by time or art. That it produces some effects on the system, which transparent water, from wells and springs, and our other rivers, does not, is an established popular opinion. It is even regarded by many persons as being, to a certain extent, medicinal, and especially adapted to

the cure of chronic functional disorders of the stomach, bowels, and liver—an opinion in which I am disposed to concur. That its daily use averts some forms of disease, may be admitted as probable; but precise observations on all these points are wanting; and I shall dismiss the subject with the presentation of two facts, in which, I trust, the reader will take a pleasant interest. *First:* Professor Bailey, after observing its numerous shoals of microscopic animalcules, expresses the opinion, that they are sufficiently abundant to render the water somewhat *nutricious. Second:* In his Letters on Louisiana, written in the year 1751, Captain Boissu informs us, that the Mississippi water has the property of contributing to the *'fecondite des femmes!'* "

The earlier readers of this Journal will remember an elaborate paper by Dr. Cartwright on the salutary influence of the Jussieua grandiflora in preventing malarious fevers. Dr. C. ascribes the exemption of large districts of country in Louisiana to the growth of this plant. In regard to his hypothesis Dr. Drake makes the following remarks:

"1. The 'coasts,' as they are called, or banks of the Mississippi, from New Orleans to the outlets of Bayou La Fourche and Bayou Plaquemine, (lying nearly north of the region where the Jussieua is supposed to destroy the cause of autumnal fever,) are equally exempt from that disease, and equally abound in aged Creoles, although there are no lakes and no Jussieua; but the river is on one side, and cypress swamps are on the other. I was prevented from visiting the district where the Jussieua grows, but traveled on the coasts.

"2. If we examine the locality which the Jussieua overspreads by the facts furnished by Darby, Cartwright, and others, we do not find that it abounds in those elements to which malaria is generally ascribed. Lakes, *in themselves*, are certainly not of that kind. The bayous, these writers inform us, are natural canals, several feet deep, in which the tides of the Gulf daily librate. The central belts between them, called shaking prairies, are lakes bridged over with matted plants; for fish may be

caught by perforating their trembling crusts. The narrow zone of palmetto swamp, which skirts the shaking prairie, is nearly destitute of annual vegetation; and the leaves of that shrub are perennial and most difficult of decomposition. Then comes the narrow tract of cypress swamp, densely overshadowed, and equally devoid of herbaceous vegetation. To this succeeds the belt of cane-brake and deciduous forest trees, so dense that a bird cannot fly through, nor a sunbeam reach the surface, which of course can sustain no succulent annual plants; then a belt of live oak, a quarter of a mile in breadth; and lastly, the narrow zone of long-cultivated, arable land, terminating in the lake or bayou. Compared with the other varieties, the tillable portions do not make a third; and they are no longer subject to the inundations of the Mississippi, which for ages could not have thrown upon them, by its overflowings, any great amount of organic matter; as most of it, in so long a voyage, is either deposited above, or decomposed, or so comminuted, that it remains suspended until the inundation gradually sinks into the Gulf. Thus, *a priori*, we should not expect to see as much autumnal fever in that region, as in those further up the river.

"3. Dr. Cartwright ascribes the transparency of the lakes in which the Jusseiua floats, to the action of that plant; but may we not, as plausibly, say, that it prefers clear to turbid waters? With these facts before us, we should, I think, regard the preventive powever of the Jussieua as an open question."

The Balize was visited by Dr. Drake and his account of what he ascertained respecting its diseases is communicated in the following paragraphs:

"The prevailing disease at the Balize, and the South West Pass, is intermittent fever, generally of the tertian type, and mild in its character, with a tendency in the patients to relapse. Doctor Van Antwerp had seen only two malignant cases. Some immigrants have lived there several years before they sickened. Mrs. Anderson, who had resided there longer than any other individual, thought the disease much less frequent than formerly. Doctor Van Antwerp had noticed a considerable number of dis-

eased spleens, but very little neuralgia or dropsy, consequent on the fever. Remittents appear to be decidedly rare, and the same is true of yellow fever, notwithstanding almost every vessel from Havana and Vera Cruz enters through this Pass, and is visited by the pilot and boarding officer. Doctor Van Antwerp arrived in October, 1839, when the fever was extensively prevalent around the shores of the Gulf, including, of course, New Orleans; and in 1841 and 1842, it was prevalent in that city and some other places; still he had seen only four cases; one of which occurred in a person from New Orleans; two others seemed to have originated in the village, and the fourth occurred in an oysterman, who declared he had not been at New Orleans. These cases occurred in different years. Eruptive fevers are exceedingly uncommon, and chronic cutaneous disorders seldom show themselves. The itch is said to lose its contagiousness, and at length cease. The summer gastro-intestinal affections, such as cholera morbus, cholera infantum, and dysentery, especially the two former, are unfrequent. Pulmonary inflammations of all kinds are quite as uncommon. Doctor Van Antwerp was induced to remove from the State of New York to the Balize, on accout of his liability to pulmonary catarrh, which his residence at the latter place has nearly removed. Croup is almost unknown. Of nervous diseases, convulsions of children are more frequent than all the rest. Doctor Van Antwerp had seen nine cases, five of which proved fatal. The number of children among whom they occurred, was about forty—the time, three and a half years. The children who suffered, were not, as it is termed in the nursery, 'within the month.' Another disease of frequent occurrence is rheumatism, which is generally subacute or chronic, and falls especially on the pilots who are greatly exposed. Consumption is said to be rare. Captain Taylor, who had resided there sixteen years, could recollect but three cases, and the patients had all arrived there with the disease in its forming stage. Nevertheless, his wife, who many years before had left the state of New York, was evidently falling into that disease, and two of his children, born at the Balize, had strumous swellings and abscesses of the neck." Y.

(To be continued.)

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

Treatment of Internal Hemorrhoids.—Dr. I. P. Garvin, in an interesting article in the Southern Medical and Surgical Journal (March, 1850,) states that he has treated a considerable number of cases of internal hemorrhoids, some of them very severe and of long standing, by the use of cold water, in the following manner:

He directs about a gill of cold water to be thrown into the rectum immediately before *every attempt* to evacuate the bowels, and that this enema be retained several minutes, if possible. This usually produces an evacuation of the feces, which have been so far softened on their surface, as to permit their escape without the least straining or irritation. After every evacution, it will be proper to use ablutions of the parts, more especially in such cases as are attended by some protrusion of the bowels.

This treatment is to be continued until some days after all uneasiness is removed. In old or very severe cases, to effect such amendments generally requires several weeks. It is highly important to impress upon the patient, the absolute necessity of perseverance in the use of cold water, even though he should be so far relieved as to feel *almost* well, for if it be suspended too soon, a very slight cause will bring on a relapse. So decided is the relief afforded by this treatment, that few persons would be disposed hastily to abandon it, but for the inconvenience of applying it daily. The ordinary apparatus for enemata are so unwieldy, that they cannot be car-

ried about conveniently. All difficulty from this source may be obviated by the employment of a small pewter syringe with a ring handle to the piston. One which will hold two ounces is very convenient, and may be carried in the pocket, when necessary.

When such enemata of cold water fail to procure sufficient alvine evacuations, the quantity of fluid may be increased to half a pint, or it may be necessary to resort to mild laxatives. Active purgation must be carefully avoided. The patient should be advised, *never* to aid the natural expulsive action of the bowels by straining. If an evacuation cannot be procured without such efforts, it is best to postpone it until aided by the action of a laxative. If the convenience of the patient will permit, it will prove advantageous to change the usual hour for the daily defecation, to a regular hour in the evening—just before retiring for the night. This will obviate the gravitation of blood consequent upon the erect position.

This treatment will usually succeed equally well in hemorrhoids attended by hemorrhage. In this form of the disease, cold water will be found a most efficient astringent.

On the alleged frequency of Ulceration of the Os and Cervix Uteri—Speculum Practice.—Dr. Tyler Smith read a valuable practical paper on this subject, before the Westminster Medical Society, April 6th, 1850. This paper has since been published (Lancet, April 20th,) and from this publication we make the following abstract:

Mr. Whitehead, of Manchester, in his work on "Abortion and Sterility," states that, of 2,000 women whose cases he investigated on their application to the Manchester Lying-in-Hospital, "1,116 had the whites at the time the inquiry was made, and a considerable number more had suffered under a similar ailment at some former period. In 936, or eighty-three per cent., the discharge bore undoubted evidence of the presence of pus, or of sanies; and in some instances it was more or less mixed with blood." Mr. Whitehead traces these discharges to "disease of the lower part of the uterus, this disease being found to exist in almost every instance;" and he further

declares that "this lesion of structure constitutes the true pathological seat of leucorrhea, and of all its associated phenomena." Dr. Henry Bennet states, in his recent work on "Inflammation of the uterus and its appendages, and on ulceration and induration of the neck of the uterus," that of 300 cases presenting "uterine symptoms," among the patients of the Western dispensary, he found that "243 were suffering from decided inflammatory disease of the cervix or its cavity; and that in 222 ulceration was present." Thus in Mr. Whitehead's cases, in 936 out of 1,116 cases of leucorrhea, the discharge was purulent or ulcerative; and in Dr. Henry Bennet's cases, 222 out of 300 or more than two-thirds, were also suffering from uterine ulceration. Dr. Bennet states that the same proportions are preserved in the cases he has treated in private practice.

It is well known that this is widely at variance with the experieace of previous observers in this country. Does this discrepancy arise from the superior modes of investigation adopted by the authors I have quoted, or does it happen from some misapprehension as to what really constitutes ulceration of the os and cervix uteri? Is there simply some mistake about the nature of ulceration, or is the difference explained by the more general use of the speculum?

Practising as a physician-accoucheur, I must get the same class of patients as those treated by Mr. Whitehead and by Dr. Bennet. I am in the habit of using the speculum in cases of obstinate leucorrhea in married females, and I trust with a desire to observe truly and faithfully, but I do not myself find uterine ulceration—at least not what seems to me to warrant this term—so frequently as Dr. Bennet, Mr. Whitehead, and some other gentlemen who have written upon the subject, in leucorrheal cases, purulent or muco-purulent. I find inflammation, engorgement, induration, excoriation, patches of aphthæ, epithelial abrasion, and granulation often enough, but very seldom what I could call ulceration, in non-malignant and non-syphilitic cases.

After giving a quotation from Dr. Bennet's description of ulceration, Dr. Smith says:

If we consider excoriation or abrasion as genuine ulceration, probably no woman ever passes through life with-

out suffering from this form of disease. In the virgin uterus, the circulation is frequently modified by the recurrence of menstruation, ovarian irritation, mental emotion, the varying condition of the bladder and rectum; and in constitutional ailments, the vaginal and uterine secretions, in common with the other secretions of the body, are frequently depraved. Excoriation and abrasion of the mucous membranes are easily accounted for under such circumstances. Menstruation alone in the turgidity of the uterus and ovaria, before the catamenial flow is established; in the exudation of blood from the surface of the uterus; and in the perforation of the peritoneal membrane for the elimination of the ovule from the ovary, trenches very nearly upon pathology. The slightest divergence from the ordinary function merges into disease.

In married women, and those who have borne children, other prejudicial causes in addition to these are in operation: such are the mechanical irritation of coitus, the risk of lacerations of the os uteri during the passage of the child in parturition, and the state of the uterine orifice which obtains after labor, and the return of the organ to quiescence. After labor, the orifice of the uterus does not contract smoothly, so as to leave the os uteri regular and even, but it becomes puckered and contracted unevenly. In irritable conditions of the mucous membrane of the uterus and vagina, or in a morbid state of the utero-vaginal secretions, these folds or corrugations are very liable to be chapped or excoriated, and I believe this is often mistaken for ulceration. All these, and other causes which I might enumerate, explain the frequency with which the os uteri deviates in color, volume, and secretion, from the strictly healthy standard. In fact, we may compare the upper part of the vagina to the fauces, which is seldom found perfectly healthy in any subject who may be examined. Some of the indurations and enlargements of the os and cervix uteri appear to resemble enlarged tonsils, and like them to increase in size without any amount of active inflammation.

The granulations which are sometimes found surrounding the os uteri—which may secrete mucus or pus abundantly, and which may bleed on being roughly handled—are, I have no doubt, the result of inflammation; but they resemble *the granular state of the conjunctiva*, rather than

the granulations of a true ulcer, the granular os uteri offering no edges or signs of solution of continuity by which we might satisfactorily declare it to be an ulcer. The *granular os uteri* would be a more correct designation in such cases than "ulceration" of the os uteri. Some of the so-called ulcerations appear to be nothing more than patches of thickened epithelium or portions of the os and cervix, from which the epithelium has been removed by acrid or irritating secretions. We can imitate this condition of the parts by the slight application of the nitrate of silver—sufficient to affect the epithelial covering, but not sufficient to injure the mucous membrane beneath.

It appears to me that we can neither receive the existence of excoriation or abrasion, of granulation or fungous growths, the secretion of pus or muco-purulent matter, as affording undeniable evidence of the existence of "ulceration" of os and cervix uteri. We must try ulceration in this part of the body by the same tests which we apply to ulcers in other parts of the economy. We must look for a solution of continuity, with a secreting surface, separated from the healthy structures, having defined edges, everted or inverted, for an ulcer. In fact, in the common pathological meaning of the term, we find ulcers having these characters in the air-passages, mouth, stomach, intestines, bladder, and other mucous surfaces. There is no mistaking the characters of an intestinal ulcer after dysentery, and there ought to be no mistake about an ulcer of the uterus. Indeed, in the corroding ulcer of the uterus we unfortunately see that this organ is but too capable of taking on all the qualities of ulceration, in a degree only equalled by its extraordinary vitality, the organ being scooped out, or eaten away in a comparatively short space of time. Cases are also met with in which the os uteri has been destroyed by the sloughing ulceration and loss of structure, sometimes following the application of the more powerful caustic agents. We are, however, called upon by the unlimited believers in uterine ulceration to admit that ulcerative disease may exist for years in its common form without any perforation, excoriation, serious loss of substance, or altered configuration. Whether we test the so-called ulceration of the uterus by ulceration occurring in other mucous

surfaces, or in the uterus itself under undoubtedly ulcerative disease, the distinctive characteristics are wanting in the great majority of cases; and they certainly are not found, unless I am most egregiously mistaken in the enormous proportion of 222 cases of ulceration to 300 cases of promiscuous uterine disease.

In all that I have said, I do not wish it to be supposed that I question the frequency of irritation, chronic inflammation, and subacute inflammation in connection with leucorrhea. Recent writers would, however, treat leucorrhea merely and solely as a symptom, not as an independent disorder. But I am well assured that it is often the disease itself, or at least all of it that we can appreciate; and that the irritable or inflammatory condition is excited secondarily and mainly by the morbid leucorrheal secretion. Some change in the innervation or nutrition of the organ occurs, or it sympathizes with a malady in some remote organ, and the secretions are consequently depraved. These depraved secretions irritate the surfaces with which they come in contact, and produce the visible signs of irritation or inflammatory action. We see these discharges sometimes inflame and excoriate even the external integument, but we should never dream of saying that the inflamed condition of the skin was the essential part of the disorder. The same observation applies to the uterus. Thus it is not pathological nor useful always to consider leucorrhea as a mere symptom; and the old plan of astringent injections, though sometimes mischievous, cannot quite be dispensed with; for in some, even profuse leucorrheas, an astringent injection by arresting the utero-vaginal discharges, does more than any other plan to soothe inflammatory conditions, or rather to suspend their causes.

Notwithstanding the use of the speculum—notwithstanding the use of lamps and glasses, there is often considerable difficulty in ascertaining the precise condition of the cavity of the uterine cervix, engorged as it is, and deep in color from irritation or other disease, and from the interruption to the circulation in the uterine organs, which is almost necessarily dependent on the introduction and expansion of the speculum within the vagina. But in the dead subject no such difficulties exist; and it might certainly be expected, since leucorrhea is a malady so

very common, that uterine ulceration would be frequently revealed by post-mortem examinations. The only place in which, so far as I am aware, post-mortem examinations have been conducted in considerable numbers, with special reference to the determination of the frequency of ulceration of the os and cervix uteri, is at St. George's Hospital. For several years past, the condition of the uterus has been examined with great minuteness and accuracy in the dead subject at this hospital.

Mr. Pollock, one of the lecturers on anatomy at St. George's Hospital, informs me that for more than three years, during which he was curator to the hospital museum, he examined the uterus internally in all the subjects in the dead-house. During this time upwards of one hundred women died in the hospital annually. In each case the uterus was laid open and carefully inspected. Mr. Pollock only detected actual and unmistakeably ulceration *in four cases.* Of these, three were scrofulous subjects, and scrofulous ulceration existed in other parts of the body; and in one of them the ulceration involved the vagina extensively as well as the os uteri.

Mr. Gray, who succeeded Mr. Pollock as curator, informs me that during his curatorship he examined the bodies of one hundred and eighty women, who had died of all diseases in St. George's Hospital, with a distinct view to ascertain the proportion of cases in which ulceration of the uterus existed. These examinations were also conducted with great care and minuteness. Out of the one hundred and eighty subjects, distinct ulceration of the os and cervix was found in only *three* instances. Slight abrasions, discolorations, and granulations were frequently observed; and this accords with the observations of Mr. Pollock. One or two other curators to St. George's Hospital, besides Mr. Pollock and Mr. Gray have arrived at the same results. It is only by pathological investigations of this kind that we can arrive at infallible results.

But it may be asked, why bestow so much pains on proving that abrasion, excoriation, and ulceration are not *ulceration?* Why dispute as to terms? Simply because a name rules treatment, and because the name of "ulceration" being first given, an heroical treatment not without danger is frequently resorted to, where milder local applications or constitutional treatment would be equally

efficacious. After Mr. Abernethy wrote his celebrated work on the Constitutional Treatment of Local Disease, his idea was pushed to its extreme, and local remedies were often most improperly neglected. Now, in all that relates to the uterine organs, the doctrines of Mr. Abernethy are in danger of being entirely refuted, and we are in some risk of utterly neglecting constitutional treatment, and of being entirely absorbed by local applications. This we cannot do without impeding the improvement of the treatment of this class of affections. When a patient is told she has an ulceration of the womb, she often thinks of an ulcer of the leg or the cheek, &c., and is proportionably frightened, because of the importance of the organ which is the seat of the presumed disease. There is nothing women will not submit to to be freed from such a dire malady. At the present time a veritable uterine panic affects the upper and middle classes of society, and every woman with the slightest ache or discharge is not satisfied until the peccant organ has been ocularly inspected. I do not believe that this state of things or its inevitable results will conduce to the dignity and respectability of our profession. I do not hesitate to affirm, so far as I have eyes to observe and a judgment to weigh facts, that much exaggeration prevails respecting the frequency of this same ulceration of the os and cervix uteri—an exaggeration which should be calmed, so that the legitimate methods of examination may lead, not to a suspicion of our profession, but to real improvement in the diagnosis and treatment of uterine disease as it actually exists. We cannot safely repudiate either the local or the constitutional treatment of uterine disease. I have seen cases in which the local ailments have been as far as possible cured; nevertheless, the constitutional symptoms remained unrelieved. I have seen others, in which judicious constitutional treatment has cured the local malady without any topical treatment whatever. But in the combat against disease, we require both constitutional and local weapons; and any views which disparage either the one or the other must cripple the resources of our art.

London Med. Gazette, April 26th, 1850.

Febrifuge and Antiperiodic Properties of Chloroform.—M. Delioux lately read to the French Academy of Medicine, a communication on this subject, in which he spoke of the benefit he had derived from the internal use of chloroform in intermittent fevers which had resisted quinine. It would appear from the tenor of the author's remarks, that no unpleasant effects have been witnessed, the only action of the medicine being that of suspending the febrile paroxysms. The usual dose is from thirty to forty drops, given in three portions a few hours before the expected access, taking care that the last dose is given about three hours prior to the fit. In obstinate tertian and quartan fevers the author gives the medicine daily, increasing the dose on the days of the access, and subsequently reducing it.—*New York Medical Gazette.*

Why Epidemics Rage at Night.—It was in one night that 4,000 perished in the plague of London of 1605. It was at night that the army of Sennacherib was destroyed. Both in England and on the continent a large portion of the cholera cases, in its several forms, have been observed to have occurred between one and two o'clock in the morning. The "danger of exposure to night air" has been a theme of physicians from time immemorial; but it is remarkable that they have never called in the aid of chemistry to account for the fact.

It is at night that the stratum of the air nearest the ground must always be the most charged with the particles of animalized matter given out from the skin, and deleterious gases such as carbonic acid gas, the product of respiration, and sulphuretted hydrogen, the product of the sewers. In the day, gases and vaporous substances of all kinds rise in the air by the rarefaction of heat; at night, when this rarefaction leaves them, they fall by an increase of gravity, if imperfectly mixed with the atmosphere, while the gases evolved during the night, instead of ascending, remain at nearly the same level. It is known that carbonic acid gas, at a low temperature, partakes so nearly of the nature of a fluid, that it may be poured out of one vessel into another; it rises at the temperature at which it is exhaled from the lungs, but its

tendency is towards the floor or the bed of the sleeper, in cold and unventilated rooms.—*New York Medical Gazette.*

Mortality of Cities.—It is stated by a writer in a New York paper that the weekly mortality of that city is 1 to every 1,289 inhabitants, while in London it is only 1 to every 2,600. Upon which the New York Medical Gazette makes the following remarks:

"There are two or three causes which go to produce the disproportion noticed above. 1st. The number of immigrants (from one to two hundred thousand annually) landed among us, many of them in a debilitated state, and liable to sicken from exposure and change of climate. 2d. The difference in the habits of the Londoners and New Yorkers, the former taking life more easily and comfortably by far than our steam-engine citizens. 3d. The variable character of our climate, as contrasted with the moist equable atmosphere of London. This, however, is of less importance than the two previous reasons. We do not see that New York need be more unhealthy than London, when the tide of immigration shall have slackened, and our people have carried the art of living to greater perfection. It would be an interesting question to ascertain the relative proportion of physicians and inhabitants, in this City and London.

On Incontinence of Urine in Children. By John Simon, Esq., F. R. S. Surgeon to St. Thomas' Hospital.—[Mr. Simon directs attention to the fact, that when irritability of the bladder exists in children, it is usually attended with a copious cayenne pepper deposit of lithic acid in the urine. In a clinical lecture upon this subject he says:

Irritability of the bladder in children usually takes, with more or less completeness, the form of *incontinence of urine:* the child wets its bed. Whenever this symptom is presented to you, if you proceed to examine the urine (as in every such case you should do,) you may pretty confidently expect to find copious crystals of lithic

acid. This condition of the urine in children is very far from painless; and in severe cases the symptoms cannot at first sight be distinguished from those of calculus: the child makes water very often, and a little at a time, doubles itself up, and cries with the pain of each effort, and pinches and pulls its prepuce, just as it would with stone in the bladder. The pain experienced is a severe scalding in the urethra, and sometimes this passage will be so much irritated as to inflame and secrete pus. You have recently seen a case under treatment in Abraham ward, which, though not one of incontinence of urine, (for it was in an adult,) will yet serve to show you the manner of dealing with such inconveniences, generally, as to depend on the passage of crystals of lithic acid in the urine. The patient, Wm. Matthews, aged twenty-two, had for two or three years suffered occasionally with symptoms, which make it probable that he has a calculus lodged in his left kidney; but the immediate cause of his admission to the hospital (December 18) was the circumstance of his then habitually passing lithic acid gravel, occasionally mixed with blood. His urination was frequent and painful. His pulse was feeble, and he was of little muscular power; his skin acted fairly; his tongue was white and coated; his bowels a little constipated. I ordered him five grains of Plummer's pill every night till his tongue was quite clean, and then changed the treatment, giving him quin. disulph. gr. ii. twice a day, and potass. bicarbon. half a drachm, five hours after his chief meal. He left the hospital, after a month's stay, quite free from uneasiness in his urinary organs, and materially improved in general health.

This case will illustrate to you the sort of treatment which I generally pursue in similar instances of chemical derangement of the urine. If the tongue is coated, and if (as is usually the case with children) the intestinal secretions are unhealthy, I give hydrarg. c. creta, or some other preparation of mercury, till that evil is remedied; I then commence the exhibition of alkalies, giving usually a single large dose daily, after the completion of the digestion of the chief meal of the day, and almost invariably I find it highly advantageous to give quinine twice a day during the same period. In my hands it has answered far better than any preparation of iron, and especially

so in the combination I have mentioned. I give it usually before breakfast and before dinner, and the alkali in copious solution five hours after the latter meal. Extreme attention to the quantity, quality, and simplicity of the diet, is essential.

With this treatment you will seldom, I think, have occasion to resort to blistering over the sacrum and other measures of a similar nature, which have been recommended for the cure of incontinence of urine in children.

Lancet, March 9, 1850, *p.* 290.

Probable Danger from the use of Cod-Liver Oil. By Dr. Benson.—At a recent meeting of the Surgical Society of Ireland, Dr. Benson made the following statement regarding cod-liver oil:

It was not to be expected that a remedy of so much power could be used with impunity in all cases. Having such efficacy in checking emaciation, in restoring the wasted flesh, and bringing back color to the faded cheek, it might be anticipated that it would in some cases of phthisis occasion a congested condition of the lung, and even give a tendency, or prove a predisposing cause to pneumonia; and this was, in fact, what he thought he had observed in some instances, and it was to this he begged to call the attention of the meeting.

It so happened that in almost every patient who died of phthisis under his care while using cod-liver oil, he found the lung congested and consolidated, not only in the neighborhood of the tubercles, but through nearly the entire of both lungs. This morbid condition, it is true, is often met with where no oil has been used, but he was struck with the greater frequency of it in the post-mortems he had made where the oil was freely administered. ('Dublin Med. Press.')—*Med. Gaz., Feb.* 1, 1850, *p.* 216.

THE WESTERN JOURNAL.

THIRD SERIES.—VOL. VI.—No. III.

LOUISVILLE, SEPTEMBER 1, 1850.

DEATH OF DR. TROOST.

The intelligence of the death of Dr. Troost, the profound Naturalist, the able Professor of Chemistry and Geology in the University of Nashville, will be received with sorrow by the friends of science in every quarter of the globe. On the occasion of his death the following preamble and resolutions were adopted by the Trustees of the University:

"The Board having learned, with profound sorrow and regret, that Gerard Troost, M. D., Professor of Chemistry, Geology, and Mineralogy in the University, after a severe and protracted illness, departed this life on the 14th instant, at one o'clock, P. M., deem it due to the memory of the distinguished Professor and to his numerous surviving friends, to record their high appreciation of his eminent virtues and meritorious labors in the cause of science and philosophy.

"Born and liberally educated in Holland, he early manifested a zealous devotion to Natural History and Chemistry, and more especially to the then infant sciences of Geology and Mineralogy. With a view to the more successful prosecution of his favorite studies, he visited Paris; and, for several years, was a pupil of the celebrated Haüy. He removed to the United States about forty years ago; and, in due time, became an American citizen. His entire life was consecrated to Geology and the kindred sciences. With what ability and success, his published wri-

tings and his well-earned reputation at home and abroad, may eloquently testify.

"As a Professor in this University, during the last twenty-two years, and as the State Geologist of Tennessee for most of that period, he won the confidence and respect of the community, by invaluable services in both capacities, as well as by the unaffected modesty, kindness and uniform courtesy of his deportment towards all men. In the various stations and relations of life, public and private, he was without reproach and above suspicion. Beloved, trusted, honored, venerated, by all those most intimately connected or associated with him, he could not make an enemy—and he had none.

"His mineral and geological cabinets and other scientific collections—the fruit of half a century's patient research and judicious exchanges with the *savans* of both hemispheres—were, probably, the richest and largest ever possessed by any individual in our country.

"Without attempting, however, on this occasion, either a formal biography or eulogium, we cordially adopt the following resolutions:

"1. *Resolved*, That by the death of the venerable, learned and accomplished PROFESSOR TROOST, the University has been deprived of one of its most useful and exemplary instructors—the country of one of its most gifted citizens—and science of one of its most faithful votaries.

"2. *Resolved*, That we deeply sympathize with the family of the deceased, and tender to the mourning widow and children the assurance of our heartfelt sense of their irreparable bereavement.

"3. *Resolved*, That as a token of respect, we wear the usual badge of mourning for thirty days, and that we attend the funeral of the deceased.

"4. *Resolved*, That these proceedings be published, and that a copy thereof be communicated, by the Secretary, to Mrs. Troost."

Dr. Troost devoted his long life assiduously to the cultivation of science. He was a genuine naturalist, with all the enthusiasm, and all the purity and simplicity of character of the best specimens of his class. His love of natural history continued unabated to the last. Only a few weeks before the close of his life we saw him as we were returning from a visit to his favorite Perry county, the locality whence he had drawn so many of his choice fossils, and the interest with which he looked over our collection was as great as could have been felt by any ardent young naturalist with the prospect of a long life before him. He had just completed and sent off to the publishers his Memoir on the *Crinoidea*, a work upon which he has expended the labor of several years, and which will be looked for with interest by paleontologists in every quarter of the world. His collection of fossils is large and varied, and his cabinet of minerals is, perhaps, the richest to be found in any collection

in our country. It is understood that his cabinet will be purchased by the University of Nashville, with the fame of which the name of Troost has been so long and honorably associated.

Dr. Troost had suffered for many months with diabetes, under which his vigorous frame was slowly wasting away, when, during the intensely hot weather in the month of August, he was seized with cholera morbus which soon carried him off. Dr. Troost is better known in Europe for his contributions to natural history than in his adopted country, most of his discoveries having been announced in the scientific journals of Paris. He has given to Tennessee a name in science wherever geology is cultivated in any part of the globe. It was fitting that on the occasion of the decease of such a man the newspapers of his city should be clothed in mourning—a compliment seldom paid to the mere man of science.

Y.

THE PRESIDENT OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

In the September number of the *Medical Examiner*, Dr. S. Jackson, President of the Philadelphia County Medical Society, treats us to sixteen pages of, what he intends shall be considered a response to our remarks upon his recent lecture on sprinkling streets. We did not receive the *Examiner* in time to respond to Dr. Jackson in the proper department of this number of the Medical Journal, but we shall endeavor to make a reply in the October number. We regret that Dr. Jackson has taken in high dudgeon, remarks of ours that scarcely justify his anger. Because we said that his objections to frozen, and wet pavements, looked very much like murmuring at Providence, Dr. Jackson infers that we charge him with irreligion, and he takes the matter so much to heart, that in the midst of his sorrows, we are at a loss to know whether he thinks we charged him with atheism or deism. Our argument was a logical one, and manifested neither a religious zeal on our part nor a want of it in Dr. Jackson, but he complains of the blow, from one end of his article to the other.

The question discussed by Dr. Jackson is an important one in hygeine, and we shall endeavor to examine its bearings in a future reply to Dr. Jackson's ill-natured attack.

B.

The New Hampshire Journal of Medicine. Edited by Edward H. Parker, A. M., M. D., August, 1850. Concord, New Hampshire.

We have received the first number of an able Medical Journal, the title of which we have given above. It is edited with ability, and we wish it an abundant and permanent prosperity. B.

JARVIS'S ADJUSTER.

An instrument, under this name, for adjusting fractures, and reducing dislocations has been before the profession for some years, but it has not received the attention its merits deserve. It enjoys the confidence, and has received the approbation of a number of eminent surgeons, among whom stands Professor Mott. We have had an opportunity of examining the instrument, and take pleasure in commending it as superior to anything of the kind we have seen, and we feel sure that a correct understanding of its merits, and the use of its powers, would do much towards stopping those suits for mal-practice, that are so annoying to Surgeons, and so injurious to the interests of the medical profession. It is time that some means were adopted for this object. A distinguished Professor in New York, Dr. James Webster, made "the frequency of suits of mal-practice," the subject of an introductory lecture, before the Geneva Medical College, last March, and no one can rise from the perusal of that lecture, without feeling that a better remedy is needed than the one suggested by Professor Webster. The abandonment of a particular class of patients, in order to avoid the risk of suits at law, is scarcely professional. The statistics of Professor Hamilton, and the quotation we made from Maclise, on the developements of broken bones in Dupuytren's Museum are not very creditable to modern surgery, and such things could not exist under the regulations of good surgery. We feel confident that if surgeons use the proper means, in the reunion of fractured bones, no justifiable claim for mal-practice would live long before a jury.

It is somewhat singular that in the Transactions of the American Medical Association, containing Professor Hamilton's deplorable statistics, on fractures, the admirable instrument of Dr. George O. Jarvis, of Connecticut, was condemned, by the committee on surgery. It is well known to our readers, that we prefer the bandage, in the treatment of

fractures, to all other contrivances, but we feel no hesitation in saying, that, if we had not acquired, by long continued labors, the requisite art for applying the bandage, there is nothing that so nearly approaches that treatment, in its perfect adaptation to all the requirements of fractures, as Jarvis's adjuster. It has capacity for placing the skilful young surgeon on something like an equality with those who have gained much by experience.

In another number we shall discuss the merits of the excellent instrument of Dr. George O. Jarvis, and endeavor to show its usefulness to surgeons and physicians. The statistics of dislocations and fractures, display the limping gait of modern surgery, and we are solicitous to do all in our power to remedy the evil. B.

DR. SUTTON ON TYPHOID FEVER.

We commence in this number, the publication of an admirable monograph on typhoid fever, from the pen of Dr. Sutton, of Georgetown, Kentucky. It is scarcely necessary for us to commend strongly to the attention of the reader, an essay that will at once command his respect, as soon as he commences its perusal. It is written in that philosophical spirit that should characterise all medical writing, and is full of devotion to truth, of correct and careful observation, and fair and legiit mate inferences. The disease, to which Dr. Sutton's monograph is devoted, has attracted much attention from medical men, and those who are familiar with the malady, will find no difficulty in realising that Dr. Sutton handles it with the power of a full acquaintance with the subject. Those who are not yet familiar with typhoid fever, may make themselves so by a diligent study of this essay. We shall probably complete it in the November number of this Journal. B.

Transactions of the Medical Association of Southern Central New York, at the Annual Meeting held at Elmira, June, 1850.

We have read these Transactions with much interest. They evince an ardent devotion to the cause of medical science, in the practical part of its duties, and show a highly commendable spirit. The most interesting features of these Transactions are the reports on the endemics and

epidemics, of the various counties, embraced within the society. A great variety of topographical, and etiological information is thus presented to the profession, and contributes to the general interests of medical science. .B

Report of the Trial of the People vs. *Dr. Horatio N. Loomis, for Libel.* Tried at the Erie County Oyer and Terminer, June 24th, 1850. Justice MULLET, presiding; JOHN TREANOR and LEANDER J. ROBERTS, Associate Justices. Buffalo: 1850.

This report did not reach us in time to be noticed in our August number, but we now take pleasure in bearing testimony to the elevated standing of Professor White, of the Buffalo Medical School, under the developments of this trial. We have already expressed our sentiments, in tolerably plain terms, on the subject of the persecutions against Dr. White, which persecutions, we are well persuaded, had their origin in something else than a desire to advance the interests of medical teaching. There are, we presume, in the shadow of all medical schools, envious spirits who are ever ready to spring upon the reputation of teachers who have been more fortunate than themselves in gaining position and character, and these ignoble factionists will "level down," if they cannot "level up."

The District Attorney for the State, in his opening address, gave Dr. Horatio N. Loomis, an amount of notoriety that has probably satiated his thirst for fame, for sometime, and JUSTICE MULLET gave him a portrait, in charging the jury, that is almost as accurate as a Daguerreotype. Loomis was acquitted, notwithstanding the strong charge against him by the Presiding Justice, but he will wear his laurels without causing any honorable mind to violate the tenth commandment. B.

NEW REMEDIES.

Dr. Debow, of Hartsville, Tennessee, mentions that a medical friend of his has been experimenting for some time past with the berries of the *Cornus Florida*, and that he has obtained from them an oil and an extract which he believes will be found to possess active remedial qualities. The gentleman is still engaged in the research, and promises to give us

the results of it when he has made more extensive trials with the new remedies. We shall expect his communication with some interest, persuaded as we are that there are valuable medicinal properties in this plant which are not generally appreciated. Y.

CHANGES IN MEDICAL SCHOOLS.

We have still other changes to chronicle in our medical schools. Dr. Bartlett and Dr. Gross have both severed their connection with the University of Louisville and been elected to Professorships in the University of the city of New York. The former of these gentlemen accepted the chair in Louisville with the understanding that he was at liberty to give it up at any time that one should be tendered to him in an Eastern school. He had been leading, as he expressed it to a friend in this city, "a wandering and provisional sort of life for nearly ten years, and longed for a fixed *home*." Dr. Gross was induced to make the exchange by the prospect of the enlarged field for practice and literary labor afforded by the metropolis of our country. But it is not to be disguised that other considerations, growing out of the temper and policy of our municipal authorities, had their weight with both gentlemen. We need not say that their decision, especially at so late a period in the vacation, is regretted by the friends of the school, but the Board of Trustees expect in a very short time to be able to announce a satisfactory reorganization of the Faculty. Y.

FUNGUS HEMATODES.

In the following letter, Dr. Debow, of Hartsville, Tennessee, refers to an operation for this intractable affection, which seems to have been crowned with success. Dr. Debow promises to communicate further details of the interesting case:

HARTSVILLE, August 27, 1850.

PROFESSOR YANDELL—DEAR SIR: I had intended before this, to have written to you, giving an account of a case of fungus hematodes, which involved some three inches of the ulna of the right arm, so much so as to render it necessary after taking away the tumor, to take out at least three or three and a half inches of the bone before it could be caused to heal. A second operation with the knife was necessary, some

two months after the first, after which, as the fungus would sprout up, it was met and finally conquered by the local application of finely pulverized corrosive sublimate, so soon as all evidences of returning fungus was manifest, the annexed portion of the bone having all been taken away. No other application was made but Peruvian bark rubbed up in Basilicon ointment, until a cure was effected. I should have remarked that so much of the corrosive sublimate was absorbed as to cause the patient to spit very freely for some two or three weeks. May not this effect have had much to do in the cure? He is now in fine health—his arm perfectly well, the part having partially filled with a sound osseous deposit, which renders it almost as strong as in his former life.

I say I had intended to give you this case before now, but feared to do so earlier lest the disease might return—some eighteen months have now elapsed since it seemed to heal, and at this time has every appearance of remaining well.

BOOKS RECEIVED.

We are indebted to the courtesy of the publishers, and the polite attentions of Messrs. Beckwith & Morton, for the following books: *General Therapeutics and Materia Medica;* adapted for a Medical Text Book. By Robley Dunglison, M. D., &c. Fourth edition, revised and improved. Philadelphia: Lea & Blanchard. *Surgical Anatomy.* By Joseph Maclise, Surgion. With colored plates, 3d part. Lea & Blanchard. *Of the causes, nature, and treatment of Palsy and Apoplexy;* of the forms, seats, complications, and morbid relations of paralytic and apoplectic diseases. By James Copland, M. D., F. R. S. &c. Lea & Blanchard. *The Principles and Practice of Dental Surgery.* By Chapin A. Harris, M. D., D. D. S. Fourth edition revised, modified, and greatly enlarged. With two hundred illustrations. Philadelphia: Lindsay & Blakiston. *Spectacles; their uses and abuses in long and short sightedness;* and the pathological conditions resulting from their irrational employment. By J. Sichel, M. D., &c. Translated from the French, by permission of the author, by Henry W. Williams, M. D., Fellow of the Massachusetts Medical Society, etc. Boston: Phillips, Sampson, & Co.

We shall endeavor to do justice to the merits of these various works, in the October number of this Journal. B.